Louisville Metro Air Pollution Control District
850 Barret Avenue
Louisville, Kentucky 40204-1745

Title V Operating Permit

Permit No.: 140-97-TV (R2) Plant ID: 0001

Effective Date: 5 February 2014 Expiration Date: 28 February 2019

Permission is hereby given by the Louisville Metro Air Pollution Control District to operate the process(es) and equipment described herein which are located at:

Carbide Industries, LLC
4400 Bells Lane
Louisville, KY 40211

The applicable procedures of District Regulation 2.16 regarding review by the U.S. EPA and public participation have been followed in the issuance of this permit. Based on review of the application on file with the District, permission is given to operate under the conditions stipulated herein. If a renewal permit is not issued prior to the expiration date, the owner or operator may continue to operate in accordance with the terms and conditions of this permit beyond the expiration date, provided that a complete renewal application is submitted to the District no earlier than eighteen (18) months and no later than six (6) months prior to the expiration date.

Application No. 54958 Application Received: 3/26/2013

Permit Writer: Rick Williams

Administratively Complete: 5/27/2013
Public Notice Date: 12/20/2013
Proposed Permit Date: 12/20/2013

Air Pollution Control Officer
February 05, 2014

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Title V Permit Revision History

Revision	Issue Date	Public Notice Date	Type	Page #	Description	
Initial	09/28/2001	12/24/2000	Initial	Entire Permit	Entire Permit	
Rev. 1		02/09/2003	Admin.	Cover page	Changed name of company, owner, and responsible official	
Rev. 2	2/5/2014	12/20/2013	Renewal	Entire permit	Title V Renewal application (58), incorporating:	3/30/2006
					Construction permit: Pneumatic transfer system (993) Permit #101-05-C	3/31/2005
					Construction permit: Five new bin vent filters (994) Permit #102-05-C	3/31/2005
					Construction permit: Coke storage bins, screen, and weigh belt (995) Permit #103-05-C	3/31/2005
					Construction permit: Pneumatic transfer system (996) Permit #104-05-C	3/31/2005
					Construction permit: Fines storage bin and truck loading station (997) Permit #105-05-C	3/31/2005
					Construction permit: Acetylene flare (1004) Permit #101-07-C	5/31/2007
					RO change (53)	7/20/2007
					RO change (52)	12/3/2008
					Construction permit: Electric Arc Furnace replacement (29233) Permit #32752-11-C	7/6/2011
					Revised Title V renewal application (54958)	3/26/2013

Abbreviations and Acronyms

AC - Additional Condition
AFS - AIRS Facility Subsystem
AIRS - Aerometric Information Retrieval System
APCD - Air Pollution Control District
ASL - Adjusted Significant Level
atm - Atmosphere
BACT - Best Available Control Technology
Btu - British Thermal Unit
°C - Degrees Centigrade
CEMS - Continuous Emission Monitoring System
CAAA - Clean Air Act Amendments (15 November 1990)
cf - Cubic foot
DOE - District Only Enforceable
°F - Degrees Fahrenheit
gal - Gallon
HAP - Hazardous Air Pollutant
Hg - Mercury
hr - hour
lbs - Pounds
l - Liter
MACT - Maximum Achievable Control Technology
m - Meter
mg - Milligram
mm - Millimeter
MM - Million
MOCS - Management of Change System
NAICS - North American Industry Classification System
NSR - New Source Review
NO_x - Nitrogen oxides
NSPS - New Source Performance Standards
PM - Particulate Matter
PM_{10} - Particulate matter less than 10 microns
ppm - Parts per million
PSD - Prevention of Significant Deterioration
PMP - Preventive Maintenance Plan
psia - Pounds per square inch absolute
RACT - Reasonably Available Control Technology
SIC - Standard Industrial Classification
SIP - State Implementation Plan
SO_2 - Sulfur dioxide
TAL - Threshold Ambient Limit
TAP - Toxic Air Pollutant
tpy - Tons per year
UTM - Universal Transverse Mercator
VOC - Volatile Organic Compound

Preamble

Title V of the Clean Air Act Amendments of 1990 required EPA to create an operating permit program for implementation by state or local air permitting authorities. The purposes of this program are (1) to require an affected company to assume full responsibility for demonstrating compliance with applicable regulations; (2) to capture all of the regulatory information pertaining to an affected company in a single document; and (3) to make permits more consistent with each other.

A company is subject to the Title V program if it meets any of several criteria related to the nature or amount of its emissions. The Title V operating permit specifies what the affected company is, how it may operate, what its applicable regulations are, how it will demonstrate compliance, and what is required if compliance is not achieved. In Jefferson County, Kentucky, the Louisville Metro Air Pollution Control District (LMAPCD or APCD) is responsible for issuing Title V permits to affected companies and enforcing local regulations and delegated federal and state regulations. EPA may enforce federal regulations but not "District Only Enforceable Regulations."

Title V offers the public an opportunity to review and comment on a company's draft permit. It is intended to help the public understand the company's compliance responsibility under the Clean Air Act. Additionally, the Title V process provides a mechanism to incorporate new applicable requirements. Such requirements are available to the public for review and comment before they are adopted.

Title V Permit General Conditions define requirements that are generally applicable to all Title V companies under the jurisdiction of LMAPCD. This avoids repeating these requirements in every section of the company's Title V permit. Company-specific conditions augment the general conditions as necessary; these appear in the sections of the permit addressing individual emission units or emission points.

The General Conditions include references to regulatory requirements that may not currently apply to the company, but which provide guidance for potential changes at the company or in the regulations during the life of the permit. Such requirements may become applicable if the company makes certain modifications or a new applicable requirement is adopted.

When the applicability of a section or subpart of a regulation is unclear, a clarifying citation will be made in the company's Title V permit at the emission unit/point level. Comments may also be added at the emission unit/point level to give further clarification or explanation.

The source's Title V permit may include a current table of "insignificant activities."

Insignificant activities are defined in District Regulation 2.16 section 1.23, as of the date the permit was proposed for review by U.S. EPA, Region 4.

Insignificant activities identified in District Regulation 2.16 section 1.23 may be subject to size or production rate disclosure requirements pursuant to Regulation 2.16 section 3.5.4.1.4.

Insignificant activities identified in District Regulation 2.16 section 1.23 shall comply with generally applicable requirements as required by District Regulation 2.16 section 4.1.9.4.

General Conditions

1. **Compliance** - The owner or operator shall comply with all applicable requirements and with all terms and conditions of this permit. Any noncompliance shall constitute a violation of the Act, State and District regulations and shall cause the source to be subject to enforcement actions including, but not limited to, the termination, revocation and reissuance, or revision of this permit, or denial of a permit application to renew this permit. Notwithstanding any other provision in the Jefferson County portion of the Kentucky SIP approved by EPA, any credible evidence may be used for the purpose of establishing whether the owner or operator is in compliance with, has violated, or is in violation of any such plan.
[Regulation 2.16, sections 4.1.3, 4.1.13.1 and 4.1.13.7]

2. **Compliance Certification** - The owner or operator shall certify, annually or more frequently if required in applicable regulations, compliance with the terms and conditions contained in this permit, including emission limitations, standards, or work practices. This certification shall meet the requirements of Regulation 2.16, sections 3.5.11 and 4.3.5. The owner or operator shall submit the annual compliance certification directly to the following address as well as to the District, as set forth in Regulation 2.16, section 4.3.5.4:

   US EPA - Region IV
   Air Enforcement Branch
   Atlanta Federal Center
   61 Forsyth Street
   Atlanta, GA 30303-8960

3. **Compliance Schedule** - A compliance schedule must meet the requirements of Regulation 2.16, section 3.5.9.5. The owner or operator shall submit a schedule of compliance for each emission unit that is not in compliance with all applicable requirements. A schedule of compliance shall be supplemental to, and shall not condone noncompliance with, the applicable requirements on which it is based. For each schedule of compliance, the owner or operator shall submit certified progress reports at least semi-annually, or at a more frequent period if specified in an applicable requirement or by the District in accordance with Regulation 2.16 section 4.3.4. The progress reports shall contain:

   a. Dates for achieving the activities, milestones, or compliance required in the schedule of compliance, and dates when activities, milestones, or compliance were achieved.
   b. An explanation of why dates in the schedule of compliance were not or will not be met, and preventive or corrective measures adopted.

4. **Duty to Supplement or Correct Application** - If the owner or operator fails to submit relevant facts or has submitted incorrect information in the permit application, it shall, upon discovery of the occurrence, promptly submit the supplementary facts or corrected information in accordance with Regulation 2.16, section 3.4.

5. **Emergency Provision**

a. An emergency shall constitute an affirmative defense to an enforcement action brought for noncompliance with technology-based emission limitations. The affirmative defense of emergency shall be demonstrated through properly signed, contemporaneous operating logs, or other relevant evidence that:

i. An emergency occurred and that the owner or operator can identify the cause of the emergency.
ii. The permitted facility was at the time being properly operated.
iii. During the period of the emergency the owner or operator expeditiously took all reasonable steps, consistent with safe operating practices, to minimize levels of emissions that exceeded the emission standards or other requirements in this permit.
iv. The owner or operator submitted notice meeting the requirements of Regulation 1.07 of the time when emissions limitations were exceeded because of the emergency. This notice must fulfill the requirement of this condition, and must contain a description of the emergency, any steps taken to mitigate emissions, and any corrective actions taken.

b. In an enforcement proceeding, the owner or operator seeking to establish the occurrence of an emergency has the burden of proof.
c. This condition is in addition to any emergency or upset provision contained in an applicable requirement.

[Regulation 2.16, sections 4.7.1 through 4.7.4]

6. **Emission Fees Payment Requirements** - The owner or operator shall pay annual emission fees in accordance with Regulation 2.08. Failure to pay the emissions fees when due shall constitute a violation of District Regulations. Such failure is subject to penalties and an increase in the fee of an additional 5% per month up to a maximum of 25% of the original amount due. In addition, failure to pay emissions fees within 60 days of the due date shall automatically suspend this permit to operate until the fee is paid or a schedule for payment acceptable to the District has been established.
[Regulation 2.08, section 2]

7. **Emission Offset Requirements** - The owner or operator shall comply with the requirements of Regulation 2.04.

8. **Enforceability Requirements** - Except for the conditions that are specifically designated as "District Only Enforceable Conditions," all terms and conditions of this permit, including any provisions designed to limit a source's potential to emit, are enforceable by EPA and citizens as specified under the Act.
[Regulation 2.16, section 4.2]

9. **Enforcement Action Defense**

a. It shall not be a defense for the owner or operator in an enforcement action that it would have been necessary for the owner or operator to halt or reduce the

permitted activity in order to maintain compliance with the conditions of this permit.

b. The owner or operator's failure to halt or reduce activity may be a mitigating factor in assessing penalties for noncompliance if the health, safety or environmental impacts of halting or reducing operations would be more serious than the impacts of continued operation.

[Regulation 2.16, sections 4.1.13.2 and 4.1.13.3]

10. **Hazardous Air Pollutants and Sources Categories** - The owner or operator shall comply with the applicable requirements of Regulations 5.02 and 5.14.

11. **Information Requests** - The owner or operator shall furnish to the District, within a reasonable time, information requested in writing by the District, to determine whether cause exists for revising, revoking and reissuing, or terminating this permit, or to determine compliance with this permit. The owner or operator shall also furnish, upon request, copies of records required to be kept by this permit.
[Regulation 2.16, section 4.1.13.6]

If information is submitted to the District under a claim of confidentiality, the source shall submit a copy of the confidential information directly to EPA.
[Regulation 2.07, section 10.2]

12. **Insignificant Activities** - The owner or operator shall:

a. Notify the District in a timely manner of any proposed change to an insignificant activity that would require a permit revision.
[Regulation 2.16, section 5]

b. Submit a current list of insignificant activities by April 15 of each year with the annual compliance certification, including an identification of the additions and removals of insignificant activities that occurred during the preceding year.
[Regulation 2.16, section 4.3.5.3.6]

13. **Inspection and Entry** - Upon presentation of credentials and other documents as required by law, the owner or operator shall allow the District or an authorized representative to perform the following during reasonable hours:

a. Enter the premises to inspect any emissions-related activity or records required in this permit.

b. Have access to and copy records required by this permit.

c. Inspect facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required by this permit.

d. Sample or monitor substances or parameters to assure compliance with this permit or any applicable requirements.

[Regulation 2.16, section 4.3.2]

14. **Monitoring and Related Record keeping and Reporting Requirements** - The owner or operator shall comply with the requirements of Regulation 2.16, section 4.1.9. The owner or operator shall submit all required monitoring reports at least once every six months, unless more frequent reporting is required by an applicable requirement. The reporting period shall be January 1st through June 30th and July 1st through December

31st of each calendar year. All reports shall be postmarked by the 60th day following the end of each reporting period.[1] If surrogate operating parameters are monitored and recorded in lieu of emission monitoring, then an exceedance of multiple parameters may be deemed a single violation by the District for enforcement purposes. All reports shall include:

- Company name,
- Plant ID number,
- Beginning and ending date of the reporting period.

The compliance reports shall clearly identify any deviation from a permit requirement or a negative declaration if there were no deviations. All semi-annual compliance reports shall include the following certification statement, per Regulation 2.16, section 3.5.11.

- "Based on information and belief formed after reasonable inquiry, I certify that the statements and information in this document are true, accurate, and complete".
- Signature and title of company responsible official.

If a change in the Responsible Official (RO) occurs during the term of this permit, the owner or operator shall provide written notification (Form AP-100A) to the District within 30 calendar days following the date a change in the designated RO occurs for this facility.

15. **Off-permit Documents** - Any applicable requirements, including emission limitations, control technology requirements, or work practice standards, contained in an off-permit document cannot be changed without undergoing the permit revision procedures in Regulation 2.16, Section 5.
[Regulation 2.16, section 4.1.5]

16. **Operational Flexibility** - The owner or operator may make changes without permit revision in accordance with Regulation 2.16, section 5.8.

17. **Permit Amendments (Administrative)** - This permit can be administratively amended by the District in accordance with Regulation 2.16, sections 1.3 and 5.4.

18. **Permit Application Submittal** - The owner or operator shall submit a timely and complete application for permit renewal or significant revision. If the owner or operator submits a timely and complete application then the owner or operator's failure to have a permit is not a violation until the District takes formal action on this permit application. This protection shall cease to apply if, subsequent to completeness determination, the owner or operator fails to submit, by the deadline specified in writing by the District, additional information required to process the application as required by Regulation 2.16, sections 3 and 5.2.

[1] Semi-Annual Reporting Deadlines:

Reporting Period	Report Submittal Deadline
January – June	31 August
July – December	1 March of the following year

19. **Permit Duration** - This permit is issued for a fixed term of 5 years, in accordance with Regulation 2.16, section 4.1.8.3.

20. **Permit Renewal, Expiration and Application** - Permit renewal, expiration and application procedural requirements shall be in accordance with Regulation 2.16, sections 4.1.8.2 and 5.3. This permit may only be renewed in accordance with section 5.3.

21. **Permit Revisions** - No permit revision shall be required under any approved economic incentives, marketable permits, emissions trading and other similar programs or processes for changes that are provided for in the permit.
[Regulation 2.16, section 4.1.16]

22. **Permit Revision Procedures (Minor)** - Except as provided in 40 CFR Part 72, the Acid Rain Program, this permit may be revised in accordance with Regulation 2.16, section 5.5.

23. **Permit Revision Procedures (Significant)** - A source seeking to make a significant permit revision shall meet all the Title V requirements for permit applications, issuance, and renewal, in accordance with Regulation 2.16, section 5.7, and all other applicable District Regulations.

24. **Permit Revocation and Termination by the District** - The District may terminate this permit only upon written request of the owner or operator. The District may revoke a permit for cause, in accordance with Regulation 2.16, section 5.11.1.1 through 5.11.1.5. For purposes of Section 5, substantial or unresolved noncompliance includes, but is not limited to:

    a. Knowingly operating process or air pollution control equipment in a manner not allowed by an applicable requirement or that results in excess emissions of a regulated air pollutant that would endanger the public or the environment.
    b. Failure or neglect to furnish information, analyses, plans, or specifications required by the District.
    c. Knowingly making any false statement in any permit application.
    d. Noncompliance with Regulation 1.07, section 4.2; or
    e. Noncompliance with KRS Chapter 77.

25. **Permit Shield** - The permit shield shall apply in accordance with Regulation 2.16, section 4.6.1.

26. **Prevention of Significant Deterioration of Air Quality** - The owner or operator shall comply with the requirements of Regulation 2.05.

27. **Property Rights** - This permit shall not convey property rights of any sort or grant exclusive privileges in accordance with Regulation 2.16, section 4.1.13.5.

28. **Public Participation** - Except for modifications qualifying for administrative permit amendments or minor permit revision procedures, all permit proceedings shall meet the requirements of Regulations 2.07, Section 1; and 2.16, sections 5.1.1.2 and 5.5.4.

29. **Reopening For Cause** - This permit shall be reopened and revised by the District in accordance with Regulation 2.16 section 5.9.

30. **Reopening for Cause by EPA** - This permit may be revised, revoked and reissued or terminated for cause by EPA in accordance with Regulation 2.16 section 5.10.

31. **Risk Management Plan (112(r))** - For each process subject to Section 112(r) of the Act, the owner or operator shall comply with 40 CFR Part 68 and Regulation 5.15.

32. **Severability Clause** - The conditions of this permit are severable. Therefore, if any condition of this permit, or the application of any condition of this permit to any specific circumstance, is determined to be invalid, the application of the condition in question to other circumstances, as well as the remainder of this permit's conditions, shall not be affected. [Regulation 2.16, section 4.1.12]

33. **Stack Height Considerations** - The owner or operator shall comply with the requirements of Regulation 2.10.

34. **Startups, Shutdowns, and Malfunctions Requirements** - The owner or operator shall comply with the requirements of Regulation 1.07.

35. **Submittal of Reports, Data, Notifications, and Applications**

    a. Applications, reports, test data, monitoring data, compliance certifications, and any other document required by this permit as set forth in Regulation 2.16 sections 3.1, 3.4, 3.5, 4.1.13.6, 5.8.5 and 5.11.7 shall be submitted to:

    Louisville Metro Air Pollution Control District
    850 Barret Ave
    Louisville, KY 40204-1745

    b. Documents which are specifically required to be submitted to EPA as set forth in Regulation 2.16 sections 3.3, and 5.8.5 shall be mailed to EPA at the following address:

    US EPA - Region IV
    APTMD - 12th floor
    Atlanta Federal Center
    61 Forsyth Street
    Atlanta, GA 30303-3104

36. **Other Applicable Regulations** - The owner or operator shall comply with all applicable requirements of the following regulations:

FEDERALLY ENFORCEABLE REGULATIONS	
Regulation	**Title**
1.01	General Application of Regulations and Standards
1.02	Definitions
1.03	Abbreviations and Acronyms
1.04	Performance Tests
1.05	Compliance with Emission Standards and Maintenance Requirements
1.06	Source Self-Monitoring and Reporting
1.07	Emissions During Startups, Shutdowns, Malfunctions, and Emergencies
1.08	Administrative Procedures
1.09	Prohibition of Air Pollution
1.10	Circumvention
1.11	Control of Open Burning
1.14	Control of Fugitive Particulate Emissions
2.01	General Application
2.02	Air Pollution Regulation Requirements and Exemptions
2.03	Permit Requirements - Non-Title V Construction and Operating Permits and Demolition/Renovation Permits
2.07	Public Notification for Title V, PSD, and Offset Permits; SIP Revisions; and Use of Emission Reduction Credits
2.09	Causes for Permit Suspension
2.10	Stack Height Considerations
2.11	Air Quality Model Usage
2.16	Title V Operating Permits
4.01	General Provisions for Emergency Episodes
4.02	Episode Criteria
4.03	General Abatement Requirements
4.07	Episode Reporting Requirements
5.01	General Provisions (for Hazardous Air Pollutants)
5.03	Potential Hazardous Emissions
6.01	General Provisions (for *Existing Affected Facilities*)
6.02	Emission Monitoring for Existing Sources
7.01	General Provisions (for *New Affected Facilities*)

DISTRICT ONLY ENFORCEABLE REGULATIONS	
Regulation	**Title**
1.12	Control of Nuisances
1.13	Control of Objectionable Odors in the Ambient Air
2.08	Emissions Fees, Permit Fees, Permit Renewal Procedures, and Additional Program Fees
5.00	Standards for Toxic Air Contaminants and Hazardous air Pollutants, Definitions
5.01	Standards for Toxic Air Contaminants and Hazardous air Pollutants, General Provisions
5.20	Methodology for Determining Benchmark Ambient Concentration of a Toxic Air Contaminant
5.21	Environmental Acceptability for Toxic Air Contaminants
5.22	Procedures for Determining the Maximum Ambient Concentration of a Toxic Air Contaminant
5.23	Categories of Toxic Air Contaminants

37. **Stratospheric Ozone Protection Requirements** - Any facility having refrigeration equipment, including air conditioning equipment, which uses a Class I or II substance (listed in 40 CFR 82, Subpart A, Appendices A and B), and any facility which maintains, services, or repairs motor vehicles using a Class I or II substance as refrigerant must comply with all requirements of 40 CFR 82, Subparts A, B, and F. Those requirements include the following restrictions:

    a. Any facility having any refrigeration equipment normally containing fifty (50) pounds of refrigerant, or more, must keep servicing records documenting the date and type of all service and the quantity of any refrigerant added according to 40 CFR 82.166;
    b. No person repairing or servicing a motor vehicle may perform any service on a motor vehicle air conditioner (MVAC) involving the refrigerant for such air conditioner unless the person has been properly trained and certified as provided in 40 CFR 82.34 and 40 CFR 82.40, and properly uses equipment approved according to 40 CFR 82.36 and 40 CFR 82.38, and complies with 40 CFR 82.42;
    c. No person may sell or distribute, or offer for sale or distribution, any substance listed as a Class I or II substance in 40 CFR 82, Subpart A, Appendices A and B, except in compliance with 40 CFR 82.34(b), 40 CFR 82.42, and/or 40 CFR 82.166;
    d. No person maintaining, servicing, repairing, or disposing of appliances may knowingly vent or otherwise release into the atmosphere any Class I or II substance used as a refrigerant in such equipment and no other person may open appliances (except MVACs as defined in 40 CFR 82.152) for service, maintenance, or repair unless the person has been properly trained and certified according to 40 CFR 82.161 and unless the person uses equipment certified for that type of appliance according to 40 CFR 82.158 and unless the person observes the practices set forth in 40 CFR 82.156 and 40 CFR 82.166;

e. No person may dispose of appliances (except small appliances, as defined in 40 CFR 82.152) without using equipment certified for that type of appliance according to 40 CFR 82.158 and without observing the practices set forth in 40 CFR 82.156 and 40 CFR 82.166;

f. No person may recover refrigerant from small appliances, MVACs and MVAC-like appliances (as defined in 40 CFR 82.152), except in compliance with the requirements of 40 CFR 82 Subpart F;

g. If the permittee manufactures, transforms, imports, or exports, a Class I or II substance (listed in 40 CFR 82, Subpart A, Appendices A and B), the permittee is subject to all requirements as specified in 40 CFR 82 Subpart A, Production and Consumption Controls.

STAR Requirements

DISTRICT ONLY ENFORCEABLE REGULATIONS		
Regulation	**Title**	**Applicable Sections**
5.01	General Provisions	1 through 4
5.20	Methodology for Determining Benchmark Ambient Concentration of a Toxic Air Contaminant	1 through 6
5.21	Environmental Acceptability for Toxic Air Contaminants	1 through 5
5.22	Procedures for Determining the Maximum Ambient Concentration of a Toxic Air Contaminant	1 through 5
5.23	Categories of Toxic Air Contaminants	1 through 6

a. The owner or operator shall submit with the notification of construction for any new emission unit the STAR EA Demonstration for all Category 1 through Category 4 TACs emitted from that emission unit.

b. The owner or operator shall submit a *plant-wide* emissions-based EA Demonstration to the District showing compliance with the *plant-wide* EA goals of 7.5 for new and existing, 3.8 for all new combined, and 1.0 for each TAC from each process when a change occurs that increases emissions above *de minimis* or previously modeled values.

c. If the TAC does not have an established BAC or *de minimis* value, the owner or operator shall calculate and report these values. The form located on the APCD website (http://www.louisvilleky.gov) may be used for determining BAC and *de minimis* values.

Plantwide Limits

S1. Standards
[Regulation 2.16, Section 4.1.1]

The plantwide emission of VOCs shall not exceed 6400 pounds per day**.**
[Regulation 6.43 section 9]

S2. Monitoring and Recordkeeping
[Regulation 2.16, sections 4.1.9]

The owner or operator shall monitor the throughput at each emission point from which VOCs may be emitted and calculate these emissions on a daily basis. The emissions from any specific source will be calculated using protocols established in the company's revised VOC Reporting Plan[2]. Daily records of the VOC emissions from each emission point and the total VOC emissions from the plant shall be kept readily available and shall be maintained for a minimum of five years from the date of creation. Specific monitoring and recordkeeping requirements are included with each affected emission unit.
[Regulation 6.43 sections 3 and 4]

S3. Reporting
[Regulation 2.16, section 4.1.9.3]

The owner or operator shall submit semi-annual compliance reports that meet the requirements specified in General Condition 14.

The owner or operator shall include in this report every instance in which the daily VOC emission limit specified in S1 above was exceeded. For every such instance the owner or operator shall report the date for which total VOC emissions exceeded the daily limit expressed in S1, the total emissions for that date, and the total daily emission from each emission unit.

[2] Plan submitted 26 June 1993 from Glen Logan, Plant/Environmental Engineer for The Carbide/Graphite Group, Inc. to John Bartles, engineer for JCAPCD.

U1 - Lime Handling System

Applicable Regulations:

FEDERALLY ENFORCABLE REGULATIONS		
Regulation	**Title**	**Applicable Sections**
1.14	Control of Fugitive Particulate Emissions	1, 2, 8
7.08	Standards of Performance for New Process Operations	1, 2, 3

Emission Points:

Emission Point	Description	Previous Designation	Applicable Regulations[3]	Control ID
001	Unloading hopper with vibrating feeder	FEP 001	1.14, 7.08	fugitive
002	Belt conveyor	FEP 003	7.08	C1
003	Bucket elevator	FEP 002	7.08	fugitive
004	Lime Storage Bin #1	FEP 005	7.08	BV1
005	Lime Storage Bin #2		7.08	

Control Devices:

Device ID	Description	Performance Indicator	Range	Stack ID
C1	F1 Bag House - Charge Mix (R.L.Flowers) 12,000 ft^3/min, ΔP=4-8 in_{H2O}, ϵ=0.995 [also controls some emissions from U2 and U3]	VE Survey	< 20% Opacity	S1
BV1	Bin vent (Lime storage bins)	VE Survey	< 20% Opacity	BV01

[3] From the 2001 permit, Unit U1, comment 2: "The Title V permit application shows all FEP equipment in this EP being installed in 1968. A control device was added to Emission Unit 3 and some control was achieved for this Emission Unit, [however] this does not constitute a modification. However, other equipment was added that did make this Emission unit subject to new source regulation 7.08."

Additional Conditions

S1. Standards

[Regulation 2.16, Section 4.1.1]

a. Particulate Matter (PM)

i. The owner or operator shall insure that the operations E001and E003 are performed within a roofed structure designed to minimize the effects of wind and limit the spread of any dust generated by the operation. [Regulation 1.14, section 8]

ii. The owner or operator shall not allow the emission of particulate matter from any emission point which is a part of this emission unit to exceed: [Regulation 7.08, section 3.1]

1. 2.34 lb/hr if the process weight rate is less than or equal to 0.50 tons per hour;
2. $3.59 \times P^{0.62}$ lb/hr (where P is the process weight rate), if the process weight rate is greater than 0.50 tons per hour and less than or equal to 30.0 tons per hour;
3. $17.31 \times P^{0.16}$ lb/hr (where P is the process weight rate), if the process weight rate is greater than 30.0 tons per hour.

b. Opacity

The owner or operator shall not cause or allow any gases that contain PM equal to or greater than 20% opacity to be discharged into the atmosphere. [Regulation 7.08, section 3.2]

S2. Monitoring and Recordkeeping

[Regulation 2.16, sections 4.1.9]

Records of all required monitoring data and support information shall be retained for a period of five years from the date of the monitoring sample, measurement, report, or application. Support information includes all calibration and maintenance records and all original strip chart recordings or computer data and log files for continuous monitoring instrumentation, and copies of all other records required by the permit.

a. Particulate Matter

i. The owner or operator shall keep records of the monthly throughput of lime at each emission point.

ii. If there are any periods during which the PM emission at any emission point exceeds the limit determined in S1.a.ii. the owner or operator shall:

1. Calculate the rate of PM emission from the affected emission point(s).[4]
   (a) Emissions from conveying equipment shall use an uncontrolled emission factor of 2.2 lb/ton;
   (b) Emissions from and to storage containers shall use an uncontrolled emission factor of 0.61 lb/ton;
   (c) Other emission factors approved by the Air Pollution Control District;
   (d) Apply the appropriate control factor for the emission point.
2. Record the following information:
   (a) Date of the excess emission;
   (b) Start and stop time of the excess emission;
   (c) Affected process equipment;
   (d) PM emissions during the excess throughput event, in pounds per hour;
   (e) Cause of the excess emission.

iii. The owner or operator shall maintain daily records of any periods when a process was operating and an associated control device was not operating, or a declaration that the control device operated at all times that day when the process was operating. For each period when the control was not operating or was bypassed the record must include:
1. Date;
2. Start time and stop time;
3. Identification of the control device and process equipment;
4. PM emissions during the bypass, in lb/hr;
5. Summary of the cause or reason for each bypass event;
6. Corrective action taken to minimize the extent or duration of the bypass event; and
7. Measures implemented to prevent reoccurrence of the situation that resulted in the bypass event.

iv. The owner or operator shall perform the following inspections to assure ongoing compliance with the established PM emission limit:
1. Daily:
   Verify that the fans associated with the equipment are operating;
2. Monthly:
   (a) Verify that dampers are working properly;
   (b) Verify the bag cleaning mechanisms are working properly;
   (c) Verify baghouse bags are clean and not filled with dust;
   (d) Inspect the bags for excessive wear or damage, and replace if necessary;
   (e) Inspect exhaust stacks for signs of dust accumulation; and
   (f) Inspect the mechanical integrity of the baghouses for excessive wear or damage.

[4] Emission calculations previously specified an emission factor of 0.12 lb/ton [AP42 table 11.24-2, SCC 3-03-024-04), based on the value for material handling and transfer of metallic ores. The values specified here are from AP42, chapter 11.17 – Lime Manufacturing, Table 4.

b. Opacity

i. The owner or operator shall conduct a weekly one-minute visible emissions survey of each emission point during normal operation and daylight hours. The opacity surveys can be performed on the building exhaust points if the process is inside an enclosure.

ii. For emission points without observed visible emissions during twelve consecutive operating weeks, the owner or operator may elect to reduce the visible emission frequency to monthly.

iii. At emission points where visible emissions are observed, the owner or operator shall initiate corrective action within eight hours of the initial observation. If the visible emissions persist, the owner or operator shall perform or cause to be performed a Method 9 or Method 22 observation, as appropriate, in accordance with 40 CFR Part 60, Appendix A, within 24 hours of the initial observation. If the opacity standard is exceeded, the owner or operator shall report the exceedance to the District, pursuant to Regulation 1.07, and take all practicable steps to eliminate the exceedance. In addition, if the visible emission survey frequency had been reduced to monthly, weekly survey frequency must be resumed until the 12-week criterion is again met.

iv. The owner or operator shall keep records of the results of all visible emissions surveys and tests. Records of the results of any visible emissions survey shall include:
1. The date of the survey,
2. The name of the person conducting the survey,
3. Whether or not visible emissions were observed, and
4. What, if any, corrective action was performed.

If an emission point is not being operated during a given survey period, then no visible emission survey needs to be performed and a negative declaration shall be entered in the record.

S3. Reporting

[Regulation 2.16, section 4.1.9.3]

The owner or operator shall submit semi-annual compliance reports that meet the requirements of General Condition 14 and include the following pollution-specific information.
[Regulation 2.16, section 3.5.11]

a. Particulate Matter

The owner or operator shall include, at a minimum, the following information in the semi-annual compliance monitoring reports for PM:

i. Emission Unit and Emission Point identification;

ii. The beginning and ending dates of the reporting period;

iii. Monthly lime throughput for each piece of equipment;

iv. Identification of all periods of exceedance of the hourly PM emissions rate standards established in S1.a.ii., including calculation of the emission rate

and the quantity of excess emissions during such periods, or a negative declaration if there were no such periods;

v. Identification of all periods during which a PM control device was bypassed during operation of the associated process equipment, including the date, time, and duration of each such bypass event and the calculated emission rate and quantity of emissions during such periods, or a negative declaration if there were no such periods;

vi. Identification of any periods during which required inspections were not completed;

vii. Description of any corrective action taken to correct abnormal operating conditions, or a negative declaration if no corrective action was taken.

b. Opacity

The owner or operator shall include, at a minimum, the following information in the semi-annual compliance monitoring report for opacity:

i. Emission Unit and Emission Point identification;

ii. The beginning and ending dates of the reporting period;

iii. The date, time, and results for each visible emission survey during which visible emissions were detected, or a negative declaration if no visible emission were observed;

iv. The date, time, and results of each Method 9 or Method 22 observation conducted, or a negative declaration if no or observations were required;

v. Description of any corrective action taken pursuant to S2.b.iii.

U2 - Coke Handling Unit

Applicable Regulations:

FEDERALLY ENFORCABLE REGULATIONS		
Regulation	**Title**	**Applicable Sections**
1.14	Control of Fugitive Particulate Emissions	1, 2, 8
6.09	Standards of Performance for Existing Process Operations	1, 2, 3
7.08	Standards of Performance for New Process Operations	1, 2, 3

Emission Points:

Emission Point	Description	Previous Designation	Applicable Regulations	Control ID
008	Coke ground pile	FEP 008	1.14	fugitive
009	Coke grade hopper	FEP 009, FEP 010	6.09	fugitive
010	Dryer feed belt conveyor	FEP 011	6.09	none
012	Coke dryer	FEP 012	6.09, 6.10	none
013	Dryer discharge hopper	- - -	6.09	C2
014	Hopper belt conveyor	FEP 013	6.09	none
015	Bucket elevator	FEP 014	6.09	none
016	Screen	FEP 003c	7.08	C2
017	Pneumatic transfer system	FEP 003d	7.08	none
018	Fines storage bin	FEP 002a	7.08	BV2
019	East storage bin	FEP 003a	7.08	C2
020	West storage bin	FEP 003b	7.08	C2
021	Fines truck-loading station	FEP 015a	7.08	fugitive
022	Fines weigh belt	FEP 017a	7.08	C1
023	East bin weigh belt	FEP 017	6.09	C1
024	West bin weigh belt	FEP 016	6.09	C1

Control Devices:

Device ID	Description	Performance Indicator	Range	Stack ID
C1	F1 Bag House - (R.L.Flowers) 12,000 ft^3/min, ΔP=4-8 in_{H2O}, ϵ=0.995 [also controls emissions from U1 and U3]	VE Survey	< 20% Opacity	S1
C2	F2 Bag House - (Amerex) 45,000 ft^3/min, ΔP=4-10 in_{H2O}, ϵ=0.995 Rebuilt March 2013	VE Survey	< 20% Opacity	S2
BV2	Bin vent (Coke fines storage)	VE Survey	< 20% Opacity	BV02

Additional Conditions

S1. Standards

[Regulation 2.16, section 4.1]

a. Particulate Matter (PM)

i. The owner or operator shall maintain and operate a fugitive-dust-suppression watering system or similar method that shall be used during periods of dry windy weather and at other times as the company deems necessary to minimize fugitive dust emissions from the coke storage pile (E008) and the coke haul-road.
[Regulation 1.14, section 2]

ii. The owner or operator shall not allow the emission of particulate matter to exceed the following limits:

1. Emission points E009 – E015, E023, E024
[Regulation 6.09, section 3.2]
   (a) 2.58 lb/hr if the process weight rate is less than or equal to 0.50 tons per hour;
   (b) $4.10 \times P^{0.67}$ lb/hr (where P is the process weight rate), if the process weight rate is greater than 0.50 tons per hour and less than or equal to 30.0 tons per hour;
   (c) $(55.0 \times P^{0.11}) - 40$ lb/hr (where P is the process weight rate), if the process weight rate is greater than 30.0 tons per hour.
2. Emission points E016 – E022
[Regulation 7.08, section 3.1]
   (a) 2.34 lb/hr if the process weight rate is less than or equal to 0.50 tons per hour;
   (b) $3.59 \times P^{0.62}$ lb/hr (where P is the process weight rate), if the process weight rate is greater than 0.50 tons per hour and less than or equal to 30.0 tons per hour;
   (c) $17.31 \times P^{0.16}$ lb/hr (where P is the process weight rate), if the process weight rate is greater than 30.0 tons per hour.

b. Opacity

The owner or operator shall not cause or allow any gases that contain PM equal to or in excess of 20% opacity to be discharged into the atmosphere.
[Regulation 6.09, section 3.3.1 and Regulation 7.08, section 3.1.1]

c. Nitrogen Oxides (NOx)

The exhaust from the coke dryer (E012) shall not contain NO_x at a concentration greater than 300 ppm, when expressed as NO_2, nor shall there be a visible discharge.[5]
[Regulation 6.09, section 4]

d. Sulfur dioxide (SO_2)

The exhaust from the coke dryer (E012) shall not contain SO_2 at a concentration greater than 2000 ppm by volume at 0% oxygen.[6]
[Regulation 6.10, section 4]

e. Carbon monoxide (CO)

The exhaust from the coke dryer (E012) shall not contain CO unless the gas stream has been burned at a minimum of 1300° F for at least 0.5 seconds in a direct flame.
[Regulation 6.10, section 5]

f. Hydrogen sulfide

The exhaust from the coke dryer (E012) shall not contain H_2S at a concentration greater than 10 grains per 100 dry standard cubic feet at 0% oxygen.
[Regulation 6.10, section 3]

g. Greenhouse Gasses

There are no standards for this pollutant.

[5] In a letter dated 2 April 1998 and submitted to the District for Carbide Industries, Corinne Greenberg, for Woolpert, demonstrated that the maximum NO_x emission from this operation is 8.5 ppm.

[6] In a letter dated 23 February 1997 and submitted to the District for Carbide Industries, Robert T. Offutt, for Smith Environmental Management Consultants demonstrated that the limit of 2000 ppm cannot be exceeded if the sulfur content of the coke is less than 3%.

S2. Monitoring and Recordkeeping

[Regulation 2.16, Section 4.1.9]

Records of all required monitoring data and support information shall be retained for a period of five years from the date of the monitoring sample, measurement, report, or application. Support information includes all calibration and maintenance records and all original strip chart recordings or computer data and log files for continuous monitoring instrumentation, and copies of all other records required by the permit.

a. Particulate Matter

i. The owner or operator shall maintain records of the monthly throughput of coke at each emission point.

ii. At the coke storage pile (E008), the coke hopper (E009), and the roads and paths between these two points that are used for the transport of the coke, the owner or operator shall perform daily observations for the presence of dust clouds from any cause, including winds and vehicle traffic. If dust is visible, the owner or operator shall take appropriate measures, such as water spay or chemical suppressants, to eliminate the dust to the extent that this is possible without creating safety hazards.

iii. If there are any periods during which the PM emission at any emission point exceeds the limit specified in S1.a.ii, the owner or operator shall:

1. Calculate the rate of PM emission from the affected emission point(s), using an emission factor of 0.26 lb_{PM}/ton_{coke}[7] for emission point E012 and 0.12 lb_{PM}/ton_{coke}[8] for all other emission points, unless a different emission factor has been approved by APCD;
2. Record the following information:
   (a) Date of the excess emission;
   (b) Start and stop time of the excess emission;
   (c) Affected process equipment;
   (d) PM emissions during the excess throughput event, in pounds per hour;
   (e) Cause of the excess emission.

iv. The owner or operator shall maintain records of any periods when a process was operating and an associated control device was not operating, or a declaration that the control device operated at all times that day when the process was operating. For each period when the control was not operating or was bypassed the record must include:

1. Date;
2. Start time and stop time;
3. Identification of the control device and process equipment;
4. PM emissions during the bypass, in pounds per hour;
5. Summary of the cause or reason for each bypass event;
6. Corrective action taken to minimize the extent or duration of the bypass event; and

[7] See AP42, table 11.04-2, SCC 3-05-004-02
[8] See AP42, table 11.24-2, SCC 3-03-024-04

7. Measures implemented to prevent reoccurrence of the situation that resulted in the bypass event.

v. The owner or operator shall perform the following inspections to assure ongoing compliance with the established PM emission limit:

1. Daily:
Verify that the fans associated with the equipment are operating;
2. Monthly:
(g) Verify that dampers are working properly;
(h) Verify the bag cleaning mechanisms are working properly;
(i) Verify baghouse bags are clean and not filled with dust;
(j) Inspect the bags for excessive wear or damage, and replace if necessary;
(k) Inspect exhaust stacks for signs of dust accumulation; and
(l) Inspect the mechanical integrity of the baghouses for excessive wear or damage.

b. Opacity

i. The owner or operator shall conduct a weekly one-minute visible emissions survey of emission points E010 – E024 during normal operation and daylight hours. The opacity surveys can be performed on the building exhaust points if the process is inside an enclosure.

ii. For emission points without observed visible emissions during twelve consecutive operating weeks, the owner or operator may elect to reduce the visible emission frequency to monthly.

iii. At emission points where visible emissions are observed, the owner or operator shall initiate corrective action within eight hours of the initial observation. If the visible emissions persist, the owner or operator shall perform or cause to be performed a Method 9 or Method 22 observation, as appropriate, in accordance with 40 CFR Part 60, Appendix A, within 24 hours of the initial observation. If the opacity standard is exceeded, the owner or operator shall report the exceedance to the District, pursuant to Regulation 1.07, and take all practicable steps to eliminate the exceedance. In addition, if the visible emission survey frequency had been reduced to monthly, weekly survey frequency must be resumed until the 12-week criterion is again met.

iv. The owner or operator shall keep records of the results of all visible emissions surveys and tests. Records of the results of any visible emissions survey shall include:
1. The date of the survey,
2. The name of the person conducting the survey,
3. Whether or not visible emissions were observed, and
4. What, if any, corrective action was performed.
If an emission point is not being operated during a given survey period, then no visible emission survey needs to be performed and a negative declaration shall be entered in the record.

c. Nitrogen oxides (NO_x)

The owner or operator shall keep records of the amount of carbon monoxide and natural gas burned in the coke dryer and the hours of operation on each fuel.

d. Sulfur dioxide (SO_2)

The owner or operator shall keep records of the average sulfur content of each delivery of coke.

e. Carbon monoxide (CO)

The owner or operator shall keep records of the amount of carbon monoxide and natural gas burned in the coke dryer and the hours of operation on each fuel.

f. Hydrogen sulfide (H_2S)

The owner or operator shall keep records of the amount of carbon monoxide and natural gas burned in the coke dryer and the hours of operation on each fuel.

g. Greenhouse Gasses

There are no monitoring or recordkeeping requirements for this pollutant.

S3. Reporting
[Regulation 2.16, section 4.1.9.3]

The owner or operator shall submit semi-annual compliance reports that meet the requirements of General Condition 14 and include the following pollution-specific information.
[Regulation 2.16, section 3.5.11]

a. Particulate Matter

The owner or operator shall include, at a minimum, the following information in the semi-annual compliance monitoring reports for PM:

i. Emission Unit and Emission Point identification;
ii. The beginning and ending dates of the reporting period;
iii. Monthly coke throughput for each piece of equipment;
iv. Identification of all periods of exceedance of the hourly PM emissions rate standards established in S1.a.ii., including calculation of the emission rate and the quantity of excess emissions during such periods, or a negative declaration if there were no such periods;
v. Identification of all periods during which a PM control device was bypassed during operation of the associated process equipment, including the date, time, and duration of each such bypass event and the calculated emission rate and quantity of emissions during such periods, or a negative declaration if there were no such periods;

vi. Identification of any periods during which required inspections were not completed;
vii. Description of any corrective action taken to correct abnormal operating conditions, or a negative declaration if no corrective action was taken.

b. Opacity

The owner or operator shall include, at a minimum, the following information in the semi-annual compliance monitoring report for opacity:
i. Emission Unit and Emission Point identification;
ii. The beginning and ending dates of the reporting period;
iii. The date, time, and results for each visible emission survey during which visible emissions were detected, or a negative declaration if no visible emission were observed;
iv. The date, time, and results of each Method 9 or Method 22 observation conducted, or a negative declaration if no or observations were required;
v. Description of any corrective action taken pursuant to S2.b.iii.

c. Nitrogen oxides (NO_x)

There are no regular reporting requirements for this pollutant.

d. Sulfur dioxide (SO_2)

There are no regular reporting requirements for this pollutant.

e. Carbon monoxide (CO)

There are no regular reporting requirements for this pollutant.

f. Hydrogen sulfide (H_2S)

There are no regular reporting requirements for this pollutant.

g. Greenhouse Gasses

There are no regular reporting requirements for this pollutant.

U3 – Charge Mix and Furnace

Applicable Regulations:

FEDERALLY ENFORCABLE REGULATIONS		
Regulation	**Title**	**Applicable Sections**
2.05	Prevention of Significant Deterioration of Air Quality	all
6.09	Standards of Performance for Existing Process Operations	1, 2, 3

DISTRICT-ONLY ENFORCABLE REGULATIONS		
Regulation	**Title**	**Applicable Sections**
5.02	General Provisions (STAR)	all
5.21	Environmental Acceptability for Toxic Air Contaminants	1, 2
5.23	Categories of Toxic Air Contaminants	1, 2

FEDERAL REGULATIONS	
Regulation	**Title**
40 CFR 60, subpart Z	Standards of Performance for Ferroalloy Production Facilities
40 CFR 63, subpart YYYYYY	National Emission Standards for Hazardous Air Pollutants for Area Sources: Ferroalloys Production Facilities

Emission Points:

Emission Point	Description	Previous Designation	Applicable Regulations	Control ID
025	Lower feed belt	FEP 018 – FEP 022	6.09	C1
026	Upper feed belt	FEP 023	6.09	C3
027	Vibratory conveyor	FEP 024	7.08	C3
028	9 Charge bins	FEP 025	7.08	C3
029	9 Charge chutes	FEP 026	7.08	C4
030	Electrode casing assembly	FEP 027	7.08, 5.21	Fugitive
031	Furnace	- - -	2.05, 7.08, 7.09, 40CFR60, subpart Z, 40CFR63, subpart 6Y	C9
032	3 Tap holes	FEP 028	7.08, 40CFR60, subpart Z, 40CFR63, subpart 6Y	C5

Control Devices:

Device ID	Description	Performance Indicator	Range	Stack ID
C1	F1 Bag House - (R.L.Flowers) 12,000 ft^3/min, ΔP=4-8 in_{H2O}, ϵ=0.995 Rebuilt March 2013 [also controls emissions from U1 and U2]	VE Survey	< 20% Opacity	S1
C3	F3 Bag House - (Standard Havens, model Alpha Mark 1, Size 21) 20,000 ft^3/min, ΔP =1-5 in_{H2O}, ϵ =0.990 Rebuilt March 2013	VE Survey	< 20% Opacity	S3
C4	F4 Bag House - (Amerex, model RP-14.33-252-D6X4) 85,000 ft^3/min, ΔP =6-10 in_{H2O}, ϵ =0.995 Rebuilt March 2013	VE Survey	< 20% Opacity	S4
C5	F5 Bag House - (R.L.Flowers, model 168 #43RW-3) 85,000 ft^3/min, ΔP =6-10 in_{H2O}, ϵ =0.995 Rebuilt March 2013	VE Survey	< 10% Opacity	S5
C9	Venturi scrubber/CO flare **Scrubber**: FMC Scrubber, model 07K 5500 ft^3/min, ϵ =0.980 ΔP =40-50 in_{H2O}@200 gal/min, **Flare**: National Airfoil, model#16 5500 ft^3/min, ϵ =0.985[9]	Scrubber: ΔP Flare: Flame presence	Scrubber: 40-50 in_{H2O} Flare: Flame	S9

Additional Conditions

S1. Standards

[(Regulation 2.16, Section 4.1.1]

a. Particulate Matter

i. The owner or operator shall not allow the emission of particulate matter to exceed the following limits:

1. Emission points E025, E026
[Regulation 6.09, section 3.2]

(a) 2.58 lb/hr if the process weight rate is less than or equal to 0.50 tons per hour;

(b) $4.10 \times P^{0.67}$ lb/hr (where P is the process weight rate), if the process weight rate is greater than 0.50 tons per hour and less than or equal to 30.0 tons per hour;

(c) $(55.0 \times P^{0.11}) - 40$ lb/hr (where P is the process weight rate), if the process weight rate is greater than 30.0 tons per hour.

[9] Permittee declared 99.9% efficiency in their application. Most flare studies (*e.g.* McDaniel, Marc, *Flare Efficiency Study*, EPA report EPA-600/2-83-052; July 1983; [http://www.epa.gov/ttn/chief/ap42/ch13/related/ref_01c13s05_jan1995.pdf]) indicate flare efficiencies of, typically, about 98.5%.

2. Emission points E027 – E030
[Regulation 7.08, section 3.1]
(a) 2.34 lb/hr if the process weight rate is less than or equal to 0.50 tons per hour;
(b) $3.59 \times P^{0.62}$ lb/hr (where P is the process weight rate), if the process weight rate is greater than 0.50 tons per hour and less than or equal to 30.0 tons per hour;
(c) $17.31 \times P^{0.16}$ lb/hr (where P is the process weight rate), if the process weight rate is greater than 30.0 tons per hour.

ii. The owner or operator shall not allow the emission of PM from the furnace, E031, to exceed 22.4 pounds per hour. The Venturi scrubber, C9, shall be operated continuously while the furnace is in operation.
[Regulation 7.08, section 3.1]

iii. PM emissions from the Venturi scrubber, C9, shall not exceed 0.51 lb/MW•hr of electrical input to the electric arc furnace.
[40 CFR 60.262(a)(2)]

iv. The owner or operator shall not allow the emission of PM from the three furnace taps, E032, to exceed 22.4 pounds per hour. Baghouse C5 shall be operated continuously while the furnace is in operation.
[Regulation 7.08, section 3.1]

v. At all times that tapping operations are being performed the owner or operator shall maintain the volumetric flow rate to the C5 baghouse at or more than 49,500 actual cubic feet per minute.[10]
[40 CFR 60.265(d)]
1. This air flow may be adjusted after demonstration of compliance with the requirements of 40 CFR 60.265(d) by using the test methods specified in 40 CFR 60.266.
2. The initial performance test specified in 40 CFR 60.266 shall be repeated no later than 10 years after the date the test was last performed.

vi. The PM control devices (baghouse F5 and Venturi scrubber C9) shall operate at all times the furnace is in operation, and combined PM emissions from these devices shall not exceed the following PSD avoidance limits:
[Regulation 2.05]
1. The PM limit is 54.0 tons per rolling 12-month period and 3.4 tons in any one calendar month;
2. The PM_{10} limit is 29.8 tons per rolling 12-month period and 2.2 tons in any one calendar month;
3. The $PM_{2.5}$ limit is 14.4 tons per rolling 12-month period and 0.7 tons in any one calendar month.

[10] The federal regulation was written with the assumption that the exhaust fan could be operated at a variable speed and that the speed would be adjusted based on the operating power of the furnace. The exhaust fan on this baghouse operates at a fixed speed. The airflow at this fixed speed was measured during the December 2012 stack test (Golden Specialty test report MW12CI100-A, dated 28 March 2013) and the testing organization determined that the flow rate measured was sufficient to meet the regulatory requirements.

b. Opacity

i. The owner or operator shall not allow the opacity of any discharge from either belt conveyor E025 or E026, or their associated bag houses (C1 and C3, respectively) to equal or exceed 20%.
[Regulation 6.09, section 3.3.1]

ii. The owner or operator shall not allow the opacity of any discharge from the vibratory conveyor, E027, or the charge deliver system, E028 and E029, or their associated bag houses (C3 and C4) to equal or exceed 20%.
[Regulation 7.08, section 3.2]

iii. The owner or operator shall not allow the opacity of the gasses exiting the Venturi scrubber or the CO flare (C9) to equal or exceed 15%.
[40 CFR 60.262(a)(3)]

iv. The owner or operator shall not allow the opacity of the gasses exiting the C5 baghouse to equal or exceed 10%.
[40 CFR 60.262(b)]

c. Sulfur Dioxide

i. The owner or operator shall not cause or allow an affected facility to release a process gas stream containing sulfur dioxide with a concentration greater than 28.63 grains per 100 dry standard cubic feet (dscf) at 0% excess oxygen.
[Regulation 7.09, Section 4]

ii. The monthly average sulfur content of the coke used in calcium carbide production shall not exceed 2.0% and the Venturi scrubber must be operated at all time the furnace is in operation.[11]
[Regulation 2.05]

d. Carbon monoxide

i. Net carbon monoxide emissions shall be limited to a consecutive 12-month total of 807 tons, in which net emissions during any single month shall not exceed 80 tons. This standard will be met if the consecutive 12-month total production of calcium carbide does not exceed 126,887 tons and any single month does not exceed 12,578 tons.[12] CO emissions from

[11] The SO_2 emission factor for calcium carbide production is dependent on the sulfur content of the coke used in production. The District has calculated SO_2 emission factors using the methodology presented in the Carbide Industries Emission Factor Review of 2008 under Tab 7 and the PTE analysis performed for the 2011 furnace construction permit. (See comment 3 of that permit.) That analysis allows the maximum sulfur content of the coke to be calculated thus:

$$\boldsymbol{S} = \left[\left(\frac{39}{\boldsymbol{P}-\boldsymbol{BL}}\right)\left(\frac{1}{1-\boldsymbol{C}}\right) + 0.0116\right] \cdot \frac{1}{1.12}$$

where P is the PSD production limit of 126,887 tons of carbide, $\boldsymbol{BL}$ is the baseline year production of 111,376 tons, and $\boldsymbol{C}$ is the scrubber control efficiency of 76.5%, as determined in the stack test of December 2012 (Golden Specialty test report MW12CI100, dated 27 March 2013), or a different value approved by the Air Pollution Control District.

[12] This calcium carbide production limit is based on a CO emission factor of 848 $lb_{CO}/ton_{carbide}$ and that all CO is combusted at either the coke dryer, flare, or utility boiler with a destruction efficiency of 98.5%. The maximum carbide production in the ten-year lookback period was 111,376 $tons_{carbide}$, resulting in production of 47,223

the electric arc furnace must be continuously controlled by combustion either at a flare or in the combustion chamber of the coke dryer, or the plant's utility boiler.
[Regulation 2.05]

ii. No person shall emit carbon monoxide gases from a process or waste gas stream unless they are burned at 1,300°F for 0.5 seconds or greater in a direct flame afterburner or equivalent device equipped with an indicating pyrometer that is positioned in the working area at the operator's eye level.[13]
[Regulation 7.09, section 5.1]

iii. No owner or operator shall cause to be discharged in to the atmosphere from any electric submerged arc furnace any gases which contain, on a dry basis, 20 or greater volume percent of carbon monoxide. Combustion of such gases under conditions acceptable to the Administrator constitutes compliance with this section. Acceptable conditions include, but are not limited to, flaring of gases or use of gases as fuel for other processes.
[40 CFR 60.263]

e. Hazardous Air Pollutants

i. Visible emissions from any control device shall not occur for more than 5% cumulative time in any 60-minute observation period.
[40 CFR 63.11526(a)]

ii. The owner or operator shall not allow fugitive emissions from the furnace building to exceed 20% opacity for a 6-minute averaging period, except for one 6-minute period per hour that does not exceed 60%.
[40 CFR 63.11526(b)]

iii. The owner or operator must install a bag-leak detection system on each fabric filter (C5).
[40 CFR 63.11527(a)(3)]

1. The system must be certified by the manufacturer to be capable of detecting emissions of PM at concentrations of 10 milligrams per actual cubic meter (0.00044 grains per actual cubic foot) or less;
2. The bag leak detection-system sensor must provide output of relative PM loadings;
3. The system must be equipped with an alarm that will sound when an increase in relative PM loadings is detected over the alarm set point established in the operation and maintenance plan, and the alarm must be located such that it can be heard, seen, or otherwise detected by the appropriate plant personnel;
4. The initial adjustment of the system must consist of establishing the baseline output by adjusting the sensitivity (range) and the

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$tons_{CO}$, and emission of 708 $tons_{CO}$ after controls. Allowing an increase of 99 tons over this level (to stay below the significant increase level), gives an allowable net controlled emission of 807 $tons_{CO}$, which is equivalent to 126,887 $tons_{carbide}$

[13] Flame chemistry insures that the flame temperature will exceed the specified temperature. A flame detection device that will shut off the flow of gas to the flare if proof-of-flame is lost will be sufficient to meet the requirements of this paragraph.

averaging period of the device, and establishing the alarm set points, at a minimum. If the system is equipped with an alarm delay time feature, you also must establish a maximum reasonable alarm delay time;

5. Following the initial adjustment, do not adjust the sensitivity or range, averaging period, alarm set point, or alarm delay time, except that, once per quarter, you may adjust the sensitivity of the bag leak detection system to account for seasonal effects, including temperature and humidity;
6. For fabric filters that are discharged to the atmosphere through a stack, the bag leak detector sensor must be installed downstream of the fabric filter and upstream of any wet scrubber, if present, after the baghouse.

f. Toxic Air Contaminants

The owner or operator shall not allow emissions of any TAC to exceed environmentally acceptable (EA) levels, whether specifically established by modeling or determined by the District to be *de minimis*.
[Regulations 5.00 and 5.21]

g. Greenhouse Gasses

There are no applicable standards for this pollutant.[14]

S2. Monitoring and Recordkeeping

[Regulation 2.16, Section 4.1.9.1.2]

Records of all required monitoring data and support information shall be retained for a period of five years from the date of the monitoring sample, measurement, report, or application. Support information includes all calibration and maintenance records and all original strip chart recordings or computer data and log files for continuous monitoring instrumentation, and copies of all other records required by the permit.

a. Particulate Matter

i. The owner or operator shall maintain daily records of the production of calcium carbide at the electric arc furnace, E032;
ii. If there are any periods during which the PM emission at any emission point exceeds the limit specified in S1.a.ii, the owner or operator shall:

[14] The furnace unit emits no regulated greenhouse gasses directly. The carbon monoxide that is emitted is combusted at the flare, which is a control device for the furnace, and the coke dryer, which is an associated process in the same emission unit. The combustion of carbon monoxide produces carbon dioxide, which is regulated as a greenhouse gas. Potential annual CO_2 emissions of 110,191 tons classify this source as major for greenhouse gas emissions. The GHG emission increase is 35,229 tons over the baseline, which is less than the threshold of 75,000 tons therefore this project is not subject to PSD regulation with respect to GHG emissions.

1. Calculate the rate of PM emission from the affected emission point(s);
2. Record the following information:
   (a) Date of the excess emission;
   (b) Start and stop time of the excess emission;
   (c) Affected process equipment;
   (d) PM emissions during the excess throughput event, in pounds per hour;
   (e) Cause of the excess emission.

iii. The owner or operator shall maintain daily records of any periods when a process was operating and an associated control device was not operating, or a declaration that the control device operated at all times that day when the process was operating. For each period which the control was not operating or was bypassed the record must include:

1. Date;
2. Start time and stop time;
3. Identification of the control device and process equipment;
4. PM, PM_{10}, and $PM_{2.5}$ emissions during the bypass, in lb/hr. Monthly emissions and 12-month rolling total emissions must then be calculated to show compliance with the PSD limits for particulates specified in S1.a.vi.
   (a) for emission points E025-E029, the uncontrolled PM emission factor is 0.22 $lb_{PM}/ton_{carbide}$.[15]
   (b) for the furnace, E031, the uncontrolled PM emission factor is 26 $lb_{PM}/ton_{carbide}$.[16]
   (c) for the tapping operation, E032, the uncontrolled PM emission factor is 0.14 $lb_{PM}/ton_{carbide}$.[17]
   (d) in all cases, the emission factor for PM_{10} is 51% of the given PM value. For $PM_{2.5}$, the emission factor is 15% of the given PM value.[18]
   (e) alternate emission factors and particle size distributions may be approved by APCD.
5. Summary of the cause or reason for each bypass event;
6. Corrective action taken to minimize the extent or duration of the bypass event; and
7. Measures implemented to prevent reoccurrence of the situation that resulted in the bypass event.

iv. For the electric arc furnace and tap holes, the owner or operator shall maintain daily records of:
[40 CFR 60.265]

1) The product being produced;
2) The constituents of the furnace charge, by weight;

[15] AP42, table 11.4-2; SCC 3-05-004-06
[16] AP42, table 11.4-2; SCC 3-05-004-01
[17] AP42, table 11.4-2; SCC 3-05-004-04
[18] These particle-size distributions are from AP42, Appendix B2, category 3, and have been used for emission inventory calculations since 2006, or earlier.

3) The time and duration of each tapping period and identification of the material tapped;
4) A continuous record of the furnace power input, measured at either the input or output side of the transformer, using a device having ±5% accuracy over its operating range;
5) A continuous record of either
   (a) the volumetric air flow rate through each separately ducted hood of the capture system, or
   (b) a continuous record of the power consumption of the fan motor and the pressure drop across the fan. If this alternative is chosen, the two records must be synchronized in time and a permanent record of the fan performance curve must be maintained on file.

b. Opacity

i. The owner or operator shall conduct a weekly one-minute visible emissions survey of emission points E025-E030, during normal operation and daylight hours. The visible emission surveys can be performed at the building exhaust points if the process is inside an enclosure. [Regulation 7.08]

ii. For emission points without observed visible emissions during twelve consecutive operating weeks, the owner or operator may elect to reduce the visible emission frequency to monthly.

iii. At emission points where visible emissions are observed, the owner or operator shall initiate corrective action within eight hours of the initial observation. If the visible emissions persist, the owner or operator shall perform or cause to be performed an EPA Method 9 or Method 22 observation, as appropriate, determination of opacity within 24 hours of the initial observation. If the opacity standard is exceeded, the owner or operator shall report the exceedance to the District, pursuant to Regulation 1.07, and take all practicable steps to eliminate the exceedance. In addition, if the visible emission survey frequency had been reduced to monthly, weekly survey frequency must be resumed until the 12-week criterion is again met.

iv. The owner or operator shall keep records of the results of all visible emissions surveys and tests. Records of the results of any visible emissions survey shall include:
   1. The date of the survey,
   2. The name of the person conducting the survey,
   3. Whether or not visible emissions were observed, and
   4. What, if any, corrective action was performed.

   If an emission point is not being operated during a given survey period, then no visible emission survey needs to be performed and a negative declaration shall be entered in the record.

v. A continuous opacity monitoring system must be installed at the discharge of each control device (baghouse C5 and the Venturi scrubber C9)

associated with the electric arc furnace.
[40 CFR 60.264(a)]

c. Sulfur Dioxide

i. The owner or operator shall maintain daily records of the sulfur content of the coke used in production of calcium carbide. These daily records shall be combined to provide a monthly average. This monthly average sulfur content and the monthly carbide production records will serve as a surrogate measurement for actual SO_2 emissions.

ii. The owner or operator shall maintain daily records of the airflow through the scrubber and temperature of the exhaust gas, to insure compliance with S1.c.i. These daily readings must be conducted after the furnace has stabilized at its nominal production rate for the day.[19]

iii. The owner or operator shall maintain daily records of any periods of time when the process was operating and the control device was not operating or a declaration that the control device operated at all times that day when the process was operating. For each period when the control was not operating or was bypassed the record must include:
   1. Date;
   2. Start time and stop time;
   3. Identification of the control device and process equipment;
   4. SO_2 emissions during the bypass in grains/dscf. Monthly emissions and 12-month rolling total emissions must then be calculated to show compliance with the PSD limits for SO_2;
   5. Summary of the cause or reason for each bypass event;
   6. Corrective action taken to minimize the extent or duration of the bypass event; and
   7. Measures implemented to prevent reoccurrence of the situation that resulted in the bypass event.

d. Carbon Monoxide

i. The owner or operator shall maintain daily records of the mass of the calcium carbide produced. This will serve as a surrogate measurement for actual CO emissions.[20]

ii. The owner or operator shall monitor the flow of CO to the coke dryer, flare, and the plant utility boiler, and time-synchronized flame sensor

[19] Airflow, moisture content of the exhaust stream, and oxygen content of the exhaust stream are required to determine the airflow corrected to "dry standard cubic feet corrected to 0% oxygen." Moisture content of 5.30% and oxygen content of 2.30 %, both based on the stack test of December 2012 (Golden Specialty test report MW12CI100, dated 27 March 2013), will be used for compliance calculations unless another value is approved by the Air Pollution Control District.

[20] The production of CO is at the rate of 0.35 $ton_{CO}/ton_{carbide}$. [Carbide Industries *Emission Factor Review*, submitted to APCD 1 April 2008].

signals at these units to verify the presence of a flame at any time there is CO gas flow to the unit.[21]

iii. The owner or operator shall maintain daily records of any periods of time when the process was operating and the control device was not operating or a declaration that the control device operated at all times that day when the process was operating. For each period when the control was not operating or was bypassed the record must include:

1. Date;
2. Start time and stop time;
3. Identification of the control device and process equipment;
4. CO emissions during the bypass. Monthly emissions and 12-month rolling total emissions must then be calculated to show compliance with the PSD limits for CO;
5. Summary of the cause or reason for each bypass event;
6. Corrective action taken to minimize the extent or duration of the bypass event; and
7. Measures implemented to prevent reoccurrence of the situation that resulted in the bypass event.

e. Hazardous Air Pollutants

i. No less frequently than once every 6 months the owner or operator must conduct an opacity test for fugitive emissions from the furnace building according to EPA Method 9. The test must be conducted for at least 60 minutes and shall include tapping the furnace or reaction vessel. The observation must be focused on the part of the building where electrometallurgical operation fugitive emissions are most likely to be observed. As an alternative to regular Method 9 observations: after the initial Method 9 performance test, VE may be monitored using Method 22 for subsequent semi-annual compliance demonstrations. The Method 22 test is successful if no VE are observed for 90 percent of the readings over the furnace cycle (tap to tap) or 60 minutes, whichever is longer. If VE are observed greater than 10 percent of the time over the furnace cycle or 60 minutes, whichever is longer, then the facility must conduct another test as soon as possible, but no later than 15 calendar days after the Method 22 test, using Method 9.
[40 CFR 63.11528(c)]

ii. The bag leak-detection sensor for baghouse C5 must operate at all times the furnace is in operation. If the bag leak alarm activates the owner or operator must conduct visual monitoring of the outlet stack within 1 hour. If visible emissions are present, a Method 22 observation for a period of 60 minutes must be conducted within 24 hours of determining the presence of any visible emissions.
[40 CFR 63.11527(a)(4)]

[21] During periods of startup and other times when there is insufficient CO production to support self-sustained combustion, the presence of a separately-fueled standing pilot in the exhaust gas stream shall be assumed to be sufficient to meet the proof-of-flame requirement.

iii. In addition to these alarm-based observations, the owner or operator must conduct a semi-annual Method 22 test to determine that the VE from each control device do not exceed the emission standard (S1.e.ii.). This observation must be for at least 60 minutes at the baghouse outlet stack. [40 CFR 63.11528(b)(2)]

iv. The owner or operator must prepare a monitoring plan for each bag leak-detection system. Each plan must address all of these items: [40 CFR 63.11527(a)(5)]

1. Installation of the bag leak detection system;
2. Initial and periodic adjustment of the bag leak detection system, including how the alarm set-point and alarm delay time will be established;
3. Operation of the bag leak detection system, including quality assurance procedures;
4. Maintenance of the bag leak detection system, including a routine maintenance schedule and spare parts inventory list;
5. How the bag leak-detection system output will be recorded and stored.

v. The owner or operator must conduct visual monitoring of the wet scrubber outlet stack for any visible emissions. [40 CFR 63.11527(b)(1)]

1. This monitoring must be conducted daily, on every day the process is in operation, during operation of the process;
2. If no visible emissions have been detected during 90 days of operation of the process, the frequency of observations may be decreased to once per calendar week. If visible emissions are detected during these inspections, you must resume daily monitoring until the 90-day criterion has again been met.

vi. If the visual monitoring specified in S2.e.v. results in the observation of visible emissions, you must conduct a Method 22 test within 24 hours of such observation. [40 CFR 63.11527(b)(2)]

f. Toxic Air Contaminants

i. The owner or operator shall maintain records sufficient to demonstrate environmental acceptability, including, but not limited to MSDS, analysis of emissions, and/or modeling results.

ii. The owner or operator shall re-evaluate the environmental acceptability and document the environmentally acceptable emissions if a new TAC is introduced or the content of a TAC in a raw material increases above *de minimis*.

g. Greenhouse Gasses

There are no monitoring or recordkeeping requirements for greenhouse gasses.

S3. Reporting

[Regulation 2.16, section 4.1.9.3]

The owner or operator shall submit semi-annual compliance reports that meet the requirements of General Condition 14 and include the following pollution-specific information.
[Regulation 2.16, section 3.5.11]

a. Particulate Matter

The owner or operator shall provide the following information in a semi-annual compliance monitoring report for PM:

i. Emission Unit and Emission Point Identification;
ii. The beginning and ending dates of the reporting period;
iii. Monthly total production of calcium carbide, in tons;
iv. Monthly total hours of operation;
v. Monthly average electrical power consumption;
vi. Identification of all periods of exceedance of the hourly PM emissions rate standards established in S1.a., including calculation of the emission rate and the quantity of excess emissions during such periods, or a negative declaration if there were no such periods;
vii. Identification of all periods during which a PM control device was bypassed during operation of the associated process equipment, including the date, time, and duration of each such bypass event and the calculated emission rate and quantity of emissions during such periods, or a negative declaration if there were no such periods;
viii. A calculation of monthly PM, PM_{10}, and $PM_{2.5}$ emissions, based on accepted emission factors, control factors (which must be stated in the report), calcium carbide production, and any control device bypass periods.
ix. Description of any corrective action taken to correct abnormal operating conditions, or a negative declaration if no corrective action was taken.

b. Opacity

The owner or operator shall provide the following information in a semi-annual compliance monitoring report for opacity:

i. Emission Unit and Emission Point Identification;
ii. The beginning and ending dates of the reporting period;
iii. The date, time, and results for each visible emission survey during which visible emissions were detected, or a negative declaration if no visible emission were observed;
iv. The date, time, and results of each Method 9 or Method 22 observation conducted, or a negative declaration if no or observations were required;
v. Description of any corrective action taken pursuant to S2.b.iii.
vi. For baghouses equipped with a continuous opacity monitoring system, any six-minute periods in which the average opacity is 15% or greater, including [40 CFR 60.264(b)]:

1. The magnitude of the excess emissions, as determined by the COMS, the date and time of the beginning and end of the period of excess emissions;
2. Specific identification of each period of excess emissions that occurs during startups, shutdowns, and malfunctions of the affected facility, including the nature and cause of any malfunction (if known), the corrective action taken or preventative measures adopted;
3. The date and time identifying each period during which the continuous monitoring system was inoperative except for zero and span checks and the nature of the system repairs or adjustments;
4. A negative declaration if there were no periods of excess emissions.

c. Sulfur Dioxide

The owner or operator shall provide the following information in a semi-annual compliance monitoring report for SO_2:

i. Emission Unit and Emission Point Identification;
ii. The beginning and ending dates of the reporting period;
iii. Monthly average sulfur content of the coke used for carbide production;
iv. Monthly average air flow volume and temperature of the exhaust exiting the scrubber stack;
v. Description of any periods during which sulfur content standard was exceeded, what was done to correct the exceedance, and the duration of the exceedance, and what actions were taken to assure that the limits of S1.c.ii. were not exceeded.
vi. A negative declaration if no control equipment bypasses occurred or the following bypass information:
    1. Number of times the furnace exhaust stream by-passed the control device (either flare, coke dryer, or utility boiler) and is vented to the atmosphere;
    2. Duration of each by-pass to the atmosphere;
vii. A calculation of monthly SO_2 emissions, based on an emission factor of 0.6 $lb_{SO2}/ton_{carbide}$[22], accepted control factors (as defined in S1.c.ii.), calcium carbide production, and any control device bypass periods.
viii. A statement as to whether the any of the instantaneous, monthly, or 12-month limits in paragraph S1.c. were exceeded or a negative declaration if there were no exceedances.

d. Carbon Monoxide

The owner or operator shall provide the following information in a semi-annual compliance monitoring report for CO:

i. Emission Unit and Emission Point Identification;
ii. The beginning and ending date of the reporting period;

[22] This emission factor, originally presented in the Carbide Industries Emission Factor Review of 2008, tab 7, shall be used unless another value is approved by APCD.

iii. A negative declaration if no control equipment bypasses occurred or the following bypass information:
   1. Number of times the furnace exhaust stream by-passed the control device (either flare, coke dryer, or utility boiler) and is vented to the atmosphere;
   2. Duration of each by-pass to the atmosphere;

iv. A calculation of monthly CO emissions, based on an emission factor of 848 $lb_{CO}/ton_{carbide}$[23], accepted control factors (as defined in S1.d.i), calcium carbide production, and any control device bypass periods.

v. A statement as to whether any of the instantaneous, monthly, or 12-month limits in paragraph S1.c. were exceeded or a negative declaration.

e. Hazardous Air Pollutants

The owner or operator shall provide the following information in an annual compliance monitoring report for opacity: [40 CFR 63.11529(c)]

i. Emission Unit and Emission Point Identification;

ii. The beginning and ending date of the reporting period;

iii. The date, time, and results of any visual monitoring at baghouse C5 required by bag leak-sensor alarms, as described in S2.e.ii. and at the Venturi scrubber required by periodic visual monitoring, as described in S2.e.v.;

iii. The date, time, and results of the Method 22 or Method 9 observations required by the semi-annual compliance observations of the control device (baghouse C5) as specified in S2.e.iii. and furnace fugitive emissions, as specified in S2.e.i.;

iv. Summary information on the number, duration, and cause (if known) for any monitor downtime incidents, other than zero and span or other calibration checks.

f. Toxic Air Contaminants

i. The owner or operator shall report any conditions that were inconsistent with those conditions analyzed in the most recent Environmental Acceptability Demonstration or a negative declaration stating that operations were within the conditions analyzed. This includes, but is not limited to, control device upset conditions.

ii. For any conditions outside the analysis, the owner or operator shall re-analyze to determine whether these conditions comply with the STAR program. Changes to the air dispersion modeling program or meteorological data used in the most recent Environmental Acceptability Demonstration do not trigger the requirement to re-analyze. [Regulation 5.21 sections 4.22 – 4.24]

iii. The owner or operator shall submit the re-evaluated EA demonstration to the District within 6 months of a change of a raw material as described in S2.f.ii

[23] This emission factor, originally presented in the Carbide Industries Emission Factor Review of 2008, tab 7, shall be used unless another value is approved by APCD.

g. Greenhouse Gasses

There are no reporting requirements for greenhouse gasses.

U4 – Primary Crushing

Applicable Regulations:

FEDERALLY ENFORCABLE REGULATIONS		
Regulation	**Title**	**Applicable Sections**
6.09	Standards of Performance for Existing Process Operations	1, 2, 3
6.43	Volatile Organic Compound Emission Reduction Requirements	9

Emission Points:

Emission Point	Description	Previous Designation	Applicable Regulations	Control ID
033	Chill molds/grillage	FEP 030	6.43 §9	F
034	Crusher box #1	FEP 033	6.09; 6.43 §9	C6
035	Crusher box #2	FEP 034	6.09; 6.43 §9	C6
036	Primary crusher #1	FEP 035	6.09; 6.43 §9	C6
037	Primary crusher #2	FEP 036	6.09; 6.43 §9	C6
038	North conveyor (Unit #1a)	FEP 037	6.09; 6.43 §9	C6
039	South conveyor (Unit #1b)	FEP 038	6.09; 6.43 §9	C6
040	Unit #2 Conveyor	FEP 039	6.09; 6.43 §9	C6
041	North crusher (Unit #3a)	FEP 040	6.09; 6.43 §9	C6
042	South crusher (Unit #3b)	FEP 041	6.09; 6.43 §9	C6
043	North bucket elevator (Unit #4a)	- - -	6.09; 6.43 §9	C6
044	South bucket elevator (Unit #4b)	- - -	6.09; 6.43 §9	C6
045	North screen (Unit #5a)	- - -	6.09; 6.43 §9	C6
046	South screen (Unit #5b)	- - -	6.09; 6.43 §9	C6
047	North bucket elevator (Unit #9a)	- - -	6.09; 6.43 §9	C6
048	South bucket elevator (Unit #9b)	- - -	6.09; 6.43 §9	C6
049	Louisville bin	FEP 045	6.09; 6.43 §9	BV3
050	Receiving bin from C6	FEP 043	6.43 §9	BV4
051	Receiving bin from cyclone	FEP 044	6.43 §9	

Control Devices:

Device ID	Description	Performance Indicator	Range	Stack ID
C6	F6 Bag House - (Standard Havens, model Alpha/ Mark 1, Size 39) 37,500 ft^3/min, ΔP=1-6 in_{H2O}, ϵ=0.990	VE Survey	< 20% Opacity	S6
BV3	Bin vent (Louisville bin)	VE Survey	< 20% Opacity	BV03
BV4	Bin vent (Dense phase receiver)	VE Survey	< 20% Opacity	BV04

Additional Conditions

S1. Standards

[Regulation 2.16, section 4.1]

a. Particulate Matter (PM)

The owner or operator shall not allow the emission of particulate matter from this emission unit to exceed the following limits:
[Regulation 6.09, section 3.2]

i. 2.58 lb/hr if the process weight rate is less than or equal to 0.50 tons per hour;

ii. $4.10 \times P^{0.67}$ lb/hr (where P is the process weight rate), if the process weight rate is greater than 0.50 tons per hour and less than or equal to 30.0 tons per hour;

iii. $(55.0 \times P^{0.11}) - 40$ lb/hr (where P is the process weight rate), if the process weight rate is greater than 30.0 tons per hour.

b. Opacity

The owner or operator shall not cause or allow any discharge from any opening in the building housing the named process equipment, or any control device associated with this equipment to equal or exceed 20% opacity.
[Regulation 6.09, section 3.1]

c. Volatile Organic Compounds (VOC)

VOC emissions resulting from the reaction of the calcium carbide processed by this equipment shall be included as part of the plant-wide VOC emission limit of 6400 pounds per day, as specified in the Plantwide Limits section of this permit.

S2. Monitoring and Recordkeeping

[Regulation 2.16, Section 4.1.9]

Records of all required monitoring data and support information shall be retained for a period of five years from the date of the monitoring sample, measurement, report, or application. Support information includes all calibration and maintenance records and all original strip chart recordings or computer data and log files for continuous monitoring instrumentation, and copies of all other records required by the permit.

a. Particulate Matter

i. The owner or operator shall maintain records of the monthly throughput of calcium carbide at each emission point.[24]

ii. If there are any periods during which the PM emission at any emission point exceeds the rate specified in S1.a, the owner or operator shall:

1. Calculate the rate of PM emission from the affected emission point(s) using an emission factor of 0.11 $lb_{PM}/ton_{carbide}$,[25] unless a different emission factor has been approved by APCD.
2. Record the following information:
   (a) Date of the excess emission;
   (b) Start and stop time of the excess emission;
   (c) Affected process equipment;
   (d) PM emissions during the excess throughput event, in pounds per hour;
   (e) Cause of the excess emission.

iii. The owner or operator shall maintain records of any periods when a process was operating and an associated control device was not operating, or a declaration that the control device operated at all times that day when the process was operating. For each period which the control was not operating or was bypassed the record must include:

1. Date;
2. Start time and stop time;
3. Identification of the control device and process equipment;
4. PM emissions during the bypass, in lb/hr;
5. Summary of the cause or reason for each bypass event;
6. Corrective action taken to minimize the extent or duration of the bypass event; and
7. Measures implemented to prevent reoccurrence of the situation that resulted in the bypass event.

iv. The owner or operator shall perform the following inspections to assure ongoing compliance with the established PM emission limit:

[24] The throughput at units operating as a pair (*e.g.* E034 and E035) may be combined and reported as a single throughput value.

[25] See AP42 table 11.4-2, SCC 3-05-004-05.

1. Daily:
   Verify that the fans associated with the equipment are operating;
2. Monthly:
   (a) Verify that dampers are working properly;
   (b) Verify the bag cleaning mechanisms are working properly;
   (c) Verify baghouse bags are clean and not filled with dust;
   (d) Inspect the bags for excessive wear or damage, and replace if necessary;
   (e) Inspect exhaust stacks for signs of dust accumulation; and
   (f) Inspect the mechanical integrity of the baghouses for excessive wear or damage.

b. Opacity

i. The owner or operator shall conduct a weekly one-minute visible emissions survey of all emission points during normal operation and daylight hours. The opacity surveys can be performed on the building exhaust points if the process is inside an enclosure.

ii. For emission points without observed visible emissions during twelve consecutive operating weeks, the owner or operator may elect to reduce the visible emission frequency to monthly.

iii. At emission points where visible emissions are observed, the owner or operator shall initiate corrective action within eight hours of the initial observation. If the visible emissions persist, the owner or operator shall perform or cause to be performed a Method 9 or Method 22 observation, as appropriate, in accordance with 40 CFR Part 60, Appendix A, within 24 hours of the initial observation. In addition, if the visible emission survey frequency had been reduced to monthly, weekly survey frequency must be resumed until the 12-week criterion is again met.

iv. The owner or operator shall keep records of the results of all visible emissions surveys and tests. Records of the results of any visible emissions survey shall include:

   1. The date of the survey,
   2. The name of the person conducting the survey,
   3. Whether or not visible emissions were observed, and
   4. What, if any, corrective action was performed.

   If an emission point is not being operated during a given survey period, then no visible emission survey needs to be performed and a negative declaration shall be entered in the record.

c. Volatile Organic Compounds

The owner or operator shall record daily:

i. The weight of calcium carbide processed through the Primary Crushing system;

ii. The time, date, and weight of calcium carbide captured by and emptied from each air pollution control device;

iii. The VOC emissions from this emission unit. For the purposes of this calculation, emissions from material collected from control devices shall

be assigned to the day that the material is collected, if collection occurs less frequently than daily. Uncontrolled VOC emissions shall be calculated using an emission factor of 4.8 $lb_{VOC}/ton_{carbide}$[26] unless a different emission factor has been approved by APCD.

S3. Reporting

[Regulation 2.16, section 4.1.9.3]

The owner or operator shall submit semi-annual compliance reports that meet the requirements of General Condition 14 and include the following pollution-specific information.
[Regulation 2.16, section 3.5.11]

a. Particulate Matter

The owner or operator shall provide the following information in a semi-annual compliance monitoring report for PM:

i. Emission Unit and Emission Point Identification;
ii. The beginning and ending dates of the reporting period;
iii. Monthly total throughput of calcium carbide, in tons;
iv. Monthly total hours of operation;
v. Identification of all periods of exceedance of the hourly PM emissions rate standards established in S1.a., including calculation of the emission rate and the quantity of excess emissions during such periods, or a negative declaration if there were no such periods;
vi. Identification of all periods during which a PM control device was bypassed during operation of the associated process equipment, including the date, time, and duration of each such bypass event and the calculated emission rate and quantity of emissions during such periods, or a negative declaration if there were no such periods;
vii. A calculation of monthly PM, PM_{10}, and $PM_{2.5}$ emissions, based on accepted emission factors, control factors (which must be stated in the report), calcium carbide production, and any control device bypass periods.

b. Opacity

The owner or operator shall provide the following information in a semi-annual compliance monitoring report for opacity:

i. Emission Unit and Emission Point Identification;
ii. The beginning and ending dates of the reporting period;
iii. The date, time, and results for each visible emission survey during which visible emissions were detected, or a negative declaration if no visible emission were observed;

[26] The emission factor of 4.8 lb/ton is the value used in the permittee's PTE calculation submitted as part of the March 2013 permit renewal application..

iv. The date, time, and results of each Method 9 or Method 22 observation required to be conducted as a result of visual emission monitoring required by S2.b.iii., or a negative declaration if no observations were required;
v. Description of any corrective action taken pursuant to S2.b.iii.

c. Volatile Organic Compounds

The owner or operator shall report VOC emissions as specified in the section of this permit related to plant-wide emission limits.

U5 – Pack and Screen

Applicable Regulations:

FEDERALLY ENFORCABLE REGULATIONS		
Regulation	**Title**	**Applicable Sections**
1.14	Control of Fugitive Particulate Emissions	1, 2, 8
6.09	Standards of Performance for Existing Process Operations	1, 2, 3
6.43	Volatile Organic Compound Emission Reduction Requirements	9
7.08	Standards of Performance for New Process Operations	1, 2, 3

Emission Points:

Emission Point	Description	Previous Designation	Applicable Regulations	Control ID
052	Apron conveyor #13	FEP 047 FEP 048	6.09; 6.43 §9	C7
053	Unit #14 bucket elevator	- - - - - -	6.09; 6.43 §9	C7
054	Unit #14A bucket elevator	- - - - - -	6.09; 6.43 §9	C7
055	Cooling Bin	FEP 049	6.09; 6.43 §9	BV5
056	Louisville Belt Conveyor	- - - - - -	6.09; 6.43 §9	C7
057	Cooling Bin Oil Screw Conveyor	- - - - - -	1.14, 6.09; 6.43 §9	none
058	Unit #12 bucket elevator	- - - - - -	6.09; 6.43 §9	C7
059	Unit #16 screen (2x1/ Nut Screen)	FEP 059	6.09; 6.43 §9	C7
060	18A Magnetic Belt Conveyor	FEP 052	6.09; 6.43 §9	C7
061	18B Magnetic Belt Conveyor	FEP 053	6.09; 6.43 §9	C7
062	Conveyor 18C	FEP 054	6.09; 6.43 §9	C7
063	Conveyor 40A	FEP 055, 056, 073, 074, 075, 084, 085, 086, 087, 089	1.14, 6.09; 6.43 §9	none
		FEP 051, FEP 090		C7
064	Conveyor 40B	FEP 056, 057, 073, 074, 075, 084, 085, 086, 087, 091	1.14, 6.09; 6.43 §9	none

Emission Point	Description	Previous Designation	Applicable Regulations	Control ID
065	Unit 22 bucket elevator	- - - - - -	6.09; 6.43 §9	C7
066	#20 Magnetic Belt Conveyor	FEP 059	6.09; 6.43 §9	C7
067	Unit #21 crusher	FEP 060	1.14, 6.09; 6.43 §9	none
068	Unit #23 screen (Miner's screen)	- - - - - -	6.09; 6.43 §9	C7
069	#25A Magnetic Belt Conveyor	FEP 071	6.09; 6.43 §9	C7
070	#25B Magnetic Belt Conveyor	FEP 072	6.09; 6.43 §9	C7
071	Unit #29 – 9" Screw Conveyor	- - - - - -	1.14, 6.09; 6.43 §9	none
072	Unit #29A – 9" Screw Conveyor	- - - - - -	1.14, 6.09; 6.43 §9	none
073	Miner's Screw	- - - - - -	1.14, 6.09; 6.43 §9	none
074	Quarter Oil Screw Conveyor	- - - - - -	1.14, 6.09; 6.43 §9	none
075	Unit #27 crusher (Quartermaker)	- - - - - -	6.09; 6.43 §9	C7
076	Transfer screw	FEP 076 FEP 061	6.09; 6.43 §9	C7
077	Unit #34 conveyor	FEP 077	6.09; 6.43 §9	C7
078	Unit #31 Bucket Elevator	- - - - - -	6.09; 6.43 §9	C7
079	Unit #32 Screw Conveyor	- - - - - -	1.14, 6.09; 6.43 §9	none
080	Unit #33 screen (Rice screen)	- - - - - -	6.09; 6.43 §9	C7
081	Cooling bin load-out	- - - - - -	1.14, 6.09; 6.43 §9	none
083	Quarter bag bin bucket elevator	- - - - - -	6.09; 6.43 §9	C7
084	Unit #37 Screw Conveyor	- - - - - -	1.14, 6.09; 6.43 §9	none
085	14ND Oil Screw	- - - - - -	1.14, 6.09; 6.43 §9	none
088	Unit #34A Belt conveyor	FEP 095	6.09; 6.43 §9	C7
089	Unit #40C Conveyor	FEP 092, 093, 094	1.14, 6.09; 6.43 §9	none/C7
090	Unit #35 Bucket elevator	- - - - - -	6.09; 6.43 §9	C7
091	Unit #36 Bucket elevator	- - - - - -	6.09; 6.43 §9	C7
092	Nut screw	- - - - - -	1.14, 6.09; 6.43 §9	none
093	Nut vibrator, South bulk load	FEP 102	6.09; 6.43 §9	C7
094	Nut vibrator, Track 2 bulk load	FEP 103	6.09; 6.43 §9	C7
095	Quarter vibrator, south bulk load	FEP 105	6.09; 6.43 §9	C7

Emission Point	Description	Previous Designation	Applicable Regulations	Control ID
096	Quarter vibrator, Track 2 bulk load	FEP 106	6.09; 6.43 §9	C7
098	Universal bin	FEP 062	6.09; 6.43 §9	BV6
099	Universal Bin Vibratory feeder	- - - - - -	1.14, 6.09; 6.43 §9	none
100	Universal Bin Container Pack	FEP 070	6.09; 6.43 §9	C7
101	Universal Bin Drum Pack	- - - - - -	1.14, 6.09; 6.43 §9	none
103	2x1 Tramp Iron bin	FEP 063	1.14, 6.09; 6.43 §9	none
104	2x1 Tramp Iron load-out	FEP 064	1.14, 6.09; 6.43 §9	none
105	Nut Tramp Iron bin	FEP 065	1.14, 6.09; 6.43 §9	none
106	Nut Tramp Iron load-out	FEP 066	1.14, 6.09; 6.43 §9	none
107	2x1 Surge hopper	FEP 067	6.09; 6.43 §9	BV7
108	OT Nut surge hopper	FEP 078	6.09; 6.43 §9	BV7
110	Miner's Screw load-out	FEP 079	1.14, 6.09; 6.43 §9	none
111	Quarter Tramp Iron bin	FEP 080	1.14, 6.09; 6.43 §9	none
112	Quarter Tramp Iron load-out	FEP 081	1.14, 6.09; 6.43 §9	none
114	Miners Container Pack load-out	FEP 083	1.14, 6.09; 6.43 §9	none
117	Rice Bin (2.5 ton)	FEP 189	6.09; 6.43 §9	BV8
118	Rice Bin load-out	FEP 190	1.14, 6.09; 6.43 §9	none
119	16x80 Bin (2.5 ton)	FEP 191	6.09; 6.43 §9	BV9
120	16x80 Bin load-out	FEP 187	1.14, 6.09; 6.43 §9	none
121	14ND Bin (5.5 ton)	FEP 186	6.09; 6.43 §9	BV10
122	14ND Bin load-out	FEP 192	1.14, 6.09; 6.43 §9	none
123	Unit #38 Bag Bin (25 tons)	FEP 093	6.09; 6.43 §9	BV11
124	Bag Bin Container pack	FEP 097	1.14, 6.09; 6.43 §9	none
125	Bag Bin Drum pack	- - - - - -	6.09; 6.43 §9	C7
126	40C hopper (6 tons)	FEP 099	1.14, 6.09; 6.43 §9	none
127	40C load-out	FEP 100	1.14, 6.09; 6.43 §9	none
128	Unit #45 - Nut bin (100 ton)	FEP 101	6.09; 6.43 §9	BV12
129	Unit #49 Quarter bin (100 ton)	FEP 104	6.09; 6.43 §9	BV13
130	Unit #48 South bulk load weigh bin	- - -	6.09; 6.43 §9	C7

Emission Point	Description	Previous Designation	Applicable Regulations	Control ID
131	South bulk load chute	FEP 107	1.14, 6.09; 6.43 §9	none
132	Unit #52 Track #2 weigh bin	- - -	6.09; 6.43 §9	C7
133	Track #2 load chute	FEP 108	1.14, 6.09; 6.43 §9	none

Control Devices:

Device ID	Description	Performance Indicator	Range	Stack ID
C7	F7 Bag House - (R.L.Flowers) (model H-E-12-43-8142) 30,000 ft^3/min, ΔP=2-5 in_{H2O}, ϵ=0.995	VE Survey	< 20% Opacity	S7
BV5	Bin vent (Cooling bin)	VE Survey	< 20% Opacity	BV05
BV 6	Bin vent (Universal bin)	VE Survey	< 20% Opacity	BV06
BV 7	Bin vent (2x1 Surge hopper and OT Nut Surge hopper)	VE Survey	< 20% Opacity	BV07
BV 8	Bin vent (Rice bin)	VE Survey	< 20% Opacity	BV08
BV 9	Bin vent (16x80 bin)	VE Survey	< 20% Opacity	BV09
BV 10	Bin vent (14ND bin)	VE Survey	< 20% Opacity	BV10
BV 11	Bin vent (Bag bin)	VE Survey	< 20% Opacity	BV11
BV 12	Bin vent (Nut bin)	VE Survey	< 20% Opacity	BV12
BV 13	Bin vent (Quarter bin)	VE Survey	< 20% Opacity	BV13

Additional Conditions

S1. Standards

[Regulation 2.16, section 4.1]

a. Particulate Matter (PM)

i. The owner or operator must take reasonable precautions to prevent fugitive emissions from becoming airborne beyond the boundaries of the building in which the equipment of this emission unit is contained. [Regulation 1.14, section 2]

ii. The owner or operator shall not allow the emission of particulate matter from this emission unit to exceed the following limits:

[Regulation 6.09, section 3.2]

1) 2.58 lb/hr if the process weight rate is less than or equal to 0.50 tons per hour;
2) $4.10 \times P^{0.67}$ lb/hr (where P is the process weight rate), if the process weight rate is greater than 0.50 tons per hour and less than or equal to 30.0 tons per hour;
3) $(55.0 \times P^{0.11}) - 40$ lb/hr (where P is the process weight rate), if the process weight rate is greater than 30.0 tons per hour.

b. Opacity

The owner or operator shall not cause or allow any discharge from any opening in the building housing the named process equipment, or any control device associated with this equipment to equal or exceed 20% opacity.
[Regulation 6.09, section 3.1]

c. Volatile Organic Compounds (VOC)

VOC emissions resulting from the reaction of the calcium carbide processed by this equipment shall be included as part of the plant-wide VOC emission limit of 6400 pounds per day, as specified in the Plantwide Limits section of this permit.

S2. Monitoring and Recordkeeping

[Regulation 2.16, Section 4.1.9]

Records of all required monitoring data and support information shall be retained for a period of five years from the date of the monitoring sample, measurement, report, or application. Support information includes all calibration and maintenance records and all original strip chart recordings or computer data and log files for continuous monitoring instrumentation, and copies of all other records required by the permit.

a. Particulate Matter

i. The owner or operator shall maintain records of the monthly throughput of calcium carbide at each emission point.
ii. If there are any periods during which the PM emission at any emission point exceeds the rate specified in S1.a.ii, the owner or operator shall:
    1. Calculate the rate of PM emission from the affected emission point(s)using an emission factor of 0.11 $lb_{PM}/ton_{carbide}$[27] for controlled sources and 2.2 $lb_{PM}/ton_{carbide}$ for uncontrolled sources[28] unless a different emission factor has been approved by APCD.
    2. Record the following information:
        (a) Date of the excess emission;
        (b) Start and stop time of the excess emission;
        (c) Affected process equipment;

[27] See AP42 table 11.4-2, SCC 3-05-004-05.
[28] This value is based on the controlled emission factor and a control efficiency of 95%.

(d) PM emissions during the excess throughput event, in pounds per hour;
(e) Cause of the excess emission.

iii. The owner or operator shall maintain records of any periods when a process was operating and an associated control device was not operating, or a declaration that the control device operated at all times that day when the process was operating. For each period which the control was not operating or was bypassed the record must include:
1. Date;
2. Start time and stop time;
3. Identification of the control device and process equipment;
4. PM emissions during the bypass, in lb/hr;
5. Summary of the cause or reason for each bypass event;
6. Corrective action taken to minimize the extent or duration of the bypass event; and
7. Measures implemented to prevent reoccurrence of the situation that resulted in the bypass event.

iv. The owner or operator shall perform the following inspections to assure ongoing compliance with the established PM emission limit:
1. Daily:
Verify that the fans associated with the equipment are operating;
2. Monthly:
(a) Verify that dampers are working properly;
(b) Verify the bag cleaning mechanisms are working properly;
(c) Verify baghouse bags are clean and not filled with dust;
(d) Inspect the bags for excessive wear or damage, and replace if necessary;
(e) Inspect exhaust stacks for signs of dust accumulation; and
(f) Inspect the mechanical integrity of the baghouses for excessive wear or damage.

b. Opacity

i. The owner or operator shall conduct a weekly one-minute visible emissions survey of all emission points during normal operation and daylight hours. The opacity surveys can be performed on the building exhaust points if the process is inside an enclosure.

ii. For emission points without observed visible emissions during twelve consecutive operating weeks, the owner or operator may elect to reduce the visible emission frequency to monthly.

iii. At emission points where visible emissions are observed, the owner or operator shall initiate corrective action within eight hours of the initial observation. If the visible emissions persist, the owner or operator shall perform or cause to be performed a Method 9 or Method 22, as appropriate, in accordance with 40 CFR Part 60, Appendix A, within 24 hours of the initial observation. In addition, if the visible emission survey frequency had been reduced to monthly, weekly survey frequency must be resumed until the 12-week criterion is again met.

iv. The owner or operator shall keep records of the results of all visible emissions surveys and tests. Records of the results of any visible emissions survey shall include:
1. The date of the survey,
2. The name of the person conducting the survey,
3. Whether or not visible emissions were observed, and
4. What, if any, corrective action was performed.

If an emission point is not being operated during a given survey period, then no visible emission survey needs to be performed and a negative declaration shall be entered in the record.

c. Volatile Organic Compounds

The owner or operator shall record daily:
i. The weight of calcium carbide processed through the Pack and Screen system;
ii. The time, date, and weight of calcium carbide captured by and emptied from each air pollution control device;
iii. The VOC emissions from this emission unit. For the purposes of this calculation, emissions from material collected from control devices shall be assigned to the day that the material is collected, if collection occurs less frequently than daily. VOC emission shall be calculated using an emission factor of 0.54 $lb_{VOC}/ton_{carbide}$[29] unless a different emission factor has been approved by APCD.

S3. Reporting
[Regulation 2.16, section 4.1.9.3]

The owner or operator shall submit semi-annual compliance reports that meet the requirements of General Condition 14 and include the following pollution-specific information.
[Regulation 2.16, section 3.5.11]

a. Particulate Matter
The owner or operator shall provide the following information in a semi-annual compliance monitoring report PM:
i. Emission Unit and Emission Point Identification;
ii. The beginning and ending dates of the reporting period;
iii. Monthly total throughput of calcium carbide, in tons;
iv. Monthly total hours of operation;
v. Identification of all periods of exceedance of the hourly PM emissions rate standards established in S1.a.ii., including calculation of the emission rate and the quantity of excess emissions during such periods, or a negative declaration if there were no such periods;

[29] The emission factor of 0.54 $lb_{VOC}/ton_{carbide}$ is the value used in permittee's PTE calculations, submitted as part of the March 2013permit renewal application.

vi. Identification of all periods during which a PM control device was bypassed during operation of the associated process equipment, including the date, time, and duration of each such bypass event and the calculated emission rate and quantity of emissions during such periods, or a negative declaration if there were no such periods;

vii. A calculation of monthly PM, PM_{10}, and $PM_{2.5}$ emissions, based on accepted emission factors, control factors (which must be stated in the report), calcium carbide production, and any control device bypass periods.

b. Opacity

The owner or operator shall provide the following information in a semi-annual compliance monitoring report for opacity:

i. Emission Unit and Emission Point Identification;

ii. The beginning and ending dates of the reporting period;

iii. The date, time, and results for each visible emission survey during which visible emissions were detected, or a negative declaration if no visible emission were observed;

iv. The date, time, and results of each Method 9 or Method 22 observation required to be conducted as a result of visual emission monitoring required by S2.b.iii., or a negative declaration if no observations were required.

v. Description of any corrective action taken pursuant to S2.b.iii.

c. Volatile Organic Compounds

The owner or operator shall report VOC emissions as specified in the section of this permit related to plant-wide emission limits.

U6 – Back End

Applicable Regulations:

FEDERALLY ENFORCABLE REGULATIONS		
Regulation	**Title**	**Applicable Sections**
1.14	Control of Fugitive Particulate Emissions	1, 2, 8
6.09	Standards of Performance for Existing Process Operations	1, 2, 3
6.43	Volatile Organic Compound Emission Reduction Requirements	9

Emission Points:

Emission Point	Description	Previous Designation	Applicable Regulations	Control ID
134	Louisville conveyor	FEP 113	1.14, 6.09; 6.43 §9	none
136	Track 3 rail loading	FEP 124	1.14, 6.09; 6.43 §9	none
141	Bin #6 – Wet Generator	FEP 118	6.09; 6.43 §9	BV14
142	Bin #5 – Wet generator	FEP 119	6.09; 6.43 §9	BV15
143	Bin #4 – NOT IN USE	FEP 120	1.14, 6.09; 6.43 §9	none
144	Bin #3 – NOT IN USE	FEP 121	1.14, 6.09; 6.43□¤	none
145	Bin #2 – Ball mill	FEP 122	6.09; 6.43□¤	BV16
146	Bin #1 – Ball mill	FEP 123	6.09; 6.43 §9	BV17
147	East elevator	FEP 185	1.14, 6.09; 6.43 §9	none
148	West elevator	FEP 185	1.14, 6.09; 6.43 §9	none
149	Hood flop gate	FEP 185	6.09; 6.43 §9	BV18
150	#1 Mill	- - -	1.14, 6.09; 6.43 §9	none
151	#2 Mill	- - -	1.14, 6.09; 6.43 §9	none
152	#1 Screw conveyor	- - -	1.14, 6.09; 6.43 §9	none
153	#2 Screw conveyor	- - -	1.14, 6.09; 6.43 §9	none
154	#3 Screw conveyor	- - -	1.14, 6.09; 6.43 §9	none
155	Calvert City belt conveyor	FEP 185	1.14, 6.09; 6.43 §9	none
156	Undercar conveyor	FEP 132, FEP 133	1.14, 6.09; 6.43 §9	none
157	Silo	FEP 126	1.14, 6.09; 6.43 §9	none

Emission Point	Description	Previous Designation	Applicable Regulations	Control ID
158	Vibratory feeder @ silo	FEP 185	1.14, 6.09; 6.43 §9	none
159	Silo elevator	FEP 125	1.14, 6.09; 6.43 §9	none
163	Calvert City RR hopper	FEP 130	1.14, 6.09; 6.43 §9	none
164	Vibratory feeder @ Calvert City hopper	FEP 131	1.14, 6.09; 6.43 §9	none

Control Devices:

Device ID	Description	Performance Indicator	Range	Stack ID
BV 14	Bin vent (Bin #6 – Wet generator)	VE Survey	< 20% Opacity	BV14
BV 15	Bin vent (Bin #5 - Wet generator)	VE Survey	< 20% Opacity	BV15
BV 16	Bin vent (Bin #2 - Ball mill)	VE Survey	< 20% Opacity	BV16
BV 17	Bin vent (Bin #1 - Ball mill)	VE Survey	< 20% Opacity	BV17
BV 18	Bin Vent (Back end dense phase system)	VE Survey	< 20% Opacity	BV18

Additional Conditions

S1. Standards

[Regulation 2.16, section 4.1]

a. Particulate Matter (PM)

i. The owner or operator must take reasonable precautions to prevent fugitive emissions from becoming airborne beyond the boundaries of the building in which the equipment of this emission unit is contained. [Regulation 1.14, section 2]

ii. The owner or operator shall not allow the emission of particulate matter from this emission unit to exceed the following limits: [Regulation 6.09, section 3.2]

1) 2.58 lb/hr if the process weight rate is less than or equal to 0.50 tons per hour;

2) $4.10 \times P^{0.67}$ lb/hr (where P is the process weight rate), if the process weight rate is greater than 0.50 tons per hour and less than or equal to 30.0 tons per hour;

3) $(55.0 \times P^{0.11}) - 40$ lb/hr (where P is the process weight rate), if the process weight rate is greater than 30.0 tons per hour.

b. Opacity

The owner or operator shall not cause or allow any discharge from any opening in the building housing the named process equipment, or any control device associated with this equipment to equal or exceed 20% opacity.
[Regulation 6.09, section 3.1]

c. Volatile Organic Compounds (VOC)
VOC emissions resulting from the reaction of the calcium carbide processed by this equipment shall be included as part of the plant-wide VOC emission limit of 6400 pounds per day, as specified in the Plantwide Limits section of this permit.

2. Monitoring and Recordkeeping
[Regulation 2.16, Section 4.1.9]

Records of all required monitoring data and support information shall be retained for a period of five years from the date of the monitoring sample, measurement, report, or application. Support information includes all calibration and maintenance records and all original strip chart recordings or computer data and log files for continuous monitoring instrumentation, and copies of all other records required by the permit.

a. Particulate Matter

i. The owner or operator shall maintain records of the monthly throughput of calcium carbide at each emission point.

ii. If there are any periods during which the PM emission at any emission point exceeds the rate specified in S1.a.ii, the owner or operator shall:
   1. Calculate the rate of PM emission from the affected emission point(s)using an emission factor of 0.11 $lb_{PM}/ton_{carbide}$[30] for controlled sources and 2.2 $lb_{PM}/ton_{carbide}$ for uncontrolled sources[31] unless a different emission factor has been approved by APCD.
   2. Record the following information:
      (a) The date of the excess emission;
      (b) The start and stop time of the excess emission;
      (c) The affected process equipment;
      (d) PM emissions during the excess throughput event, in pounds per hour;
      (e) The cause of the excess emission.

iii. The owner or operator shall maintain records of any periods when a process was operating and an associated control device was not operating, or a declaration that the control device operated at all times that day when the process was operating. For each period which the control was not operating or was bypassed the record must include:

[30] See AP42 table 11.4-2, SCC 3-05-004-05.
[31] This value is based on the controlled emission factor and a control efficiency of 95%.

1. Date;
2. Start time and stop time;
3. Identification of the control device and process equipment;
4. PM emissions during the bypass, in lb/hr;
5. Summary of the cause or reason for each bypass event;
6. Corrective action taken to minimize the extent or duration of the bypass event; and
7. Measures implemented to prevent reoccurrence of the situation that resulted in the bypass event.

v. The owner or operator shall perform the following inspections to assure ongoing compliance with the established PM emission limit:

1) Daily:
Verify that the fans associated with the equipment are operating;

2) Monthly:
(a) Verify that dampers are working properly;
(b) Verify the bag cleaning mechanisms are working properly;
(c) Verify baghouse bags are clean and not filled with dust;
(d) Inspect the bags for excessive wear or damage, and replace if necessary;
(e) Inspect exhaust stacks for signs of dust accumulation; and
(f) Inspect the mechanical integrity of the baghouses for excessive wear or damage.

b. Opacity

i. The owner or operator shall conduct a weekly one-minute visible emissions survey of all emission points during normal operation and daylight hours. The opacity surveys can be performed on the building exhaust points if the process is inside an enclosure.

ii. For emission points without observed visible emissions during twelve consecutive operating weeks, the owner or operator may elect to reduce the visible emission frequency to monthly.

iii. At emission points where visible emissions are observed, the owner or operator shall initiate corrective action within eight hours of the initial observation. If the visible emissions persist, the owner or operator shall perform or cause to be performed a Method 9 or Method 22, as appropriate, in accordance with 40 CFR Part 60, Appendix A, within 24 hours of the initial observation. In addition, if the visible emission survey frequency had been reduced to monthly, weekly survey frequency must be resumed until the 12-week criterion is again met.

iv. The owner or operator shall keep records of the results of all visible emissions surveys and tests. Records of the results of any visible emissions survey shall include:

1. The date of the survey,
2. The name of the person conducting the survey,
3. Whether or not visible emissions were observed, and
4. What, if any, corrective action was performed.

If an emission point is not being operated during a given survey period, then no visible emission survey needs to be performed and a negative declaration shall be entered in the record.

c. Volatile Organic Compounds

The owner or operator shall record daily:

i. The weight of calcium carbide processed through the Back End system;

ii. The time, date, and weight of calcium carbide captured by and emptied from each air pollution control device;

iii. The VOC emissions from this emission unit. For the purposes of this calculation, emissions from material collected from control devices shall be assigned to the day that the material is collected, if collection occurs less frequently than daily. VOC emissions shall be calculated using an emission factor of 0.54 $lb_{VOC}/ton_{carbide}$ for uncontrolled emissions and 0.0399 $lb_{VOC}/ton_{carbide}$ for controlled emissions[32] unless different emission factors are approved by APCD.

S3. Reporting

[Regulation 2.16, section 4.1.9.3]

The owner or operator shall submit semi-annual compliance reports that meet the requirements of General Condition 14 and include the following pollution-specific information.

[Regulation 2.16, section 3.5.11]

a. Particulate Matter

The owner or operator shall provide the following information in a semi-annual compliance monitoring report for PM:

i. Emission Unit and Emission Point Identification;

ii. The beginning and ending dates of the reporting period;

iii. Monthly total throughput of calcium carbide, in tons;

iv. Monthly total hours of operation;

v. Identification of all periods of exceedance of the hourly PM emissions rate standards established in S1.a.ii., including calculation of the emission rate and the quantity of excess emissions during such periods, or a negative declaration if there were no such periods;

vi. Identification of all periods during which a PM control device was bypassed during operation of the associated process equipment, including the date, time, and duration of each such bypass event and the calculated emission rate and quantity of emissions during such periods, or a negative declaration if there were no such periods;

vii. A calculation of monthly PM, PM_{10}, and $PM_{2.5}$ emissions, based on accepted emission factors, control factors (which must be stated in the

[32] These emission factors are the values used in the permittee's PTE calculations submitted as part of the March 2013 permit renewal application and supported by testing performed by TRC Solutions on April 23, 2008.

report), calcium carbide production, and any control device bypass periods.

b. Opacity

The owner or operator shall provide the following information in a semi-annual compliance monitoring report for opacity:

i. Emission Unit and Emission Point Identification;
ii. The beginning and ending dates of the reporting period;
iii. The date, time, and results for each visible emission survey during which visible emissions were detected, or a negative declaration if no visible emission were observed;
iv. The date, time, and results of each Method 9 or Method 22 observation required to be conducted as a result of visual emission monitoring required by S2.b.iii., or a negative declaration if no observations were required.
v. Description of any corrective action taken pursuant to S2.b.iii.

c. Volatile Organic Compounds

The owner or operator shall report VOC emissions as specified in the section of this permit related to plant-wide emission limits.

U7 – Desulfurization Operations

Applicable Regulations:

FEDERALLY ENFORCABLE REGULATIONS		
Regulation	**Title**	**Applicable Sections**
1.14	Control of Fugitive Particulate Emissions	1, 2, 8
6.09	Standards of Performance for Existing Process Operations	1, 2, 3
6.43	Volatile Organic Compound Emission Reduction Requirements	9
7.08	Standards of Performance for New Process Operations	1, 2, 3

Emission Points:

Emission Point	Description	Previous Designation	Applicable Regulations	Control ID
165	CaC_2 Container #1	FEP 134	1.14, 7.08; 6.43 §9	none
166	CaC_2 Container #2	FEP 135	1.14, 7.08; 6.43 §9¤	none
167	CaC_2 Transporter	FEP 136	1.14, 7.08; 6.43 §9	none
168	Carbide bin	FEP 137	1.14, 7.08; 6.43 §9	none
169	Carbide feedscrew	- - - - - -	1.14, 7.08; 6.43 §9	none
170	C Stand lime bin	FEP 138	1.14, 7.08; 6.43 §9	none
171	D Stand lime bin	FEP 139	1.14, 7.08; 6.43 §9	none
172	Ball mill	- - - - - -	1.14, 7.08; 6.43□¤	none
173	Additive feedscrew	- - - - - -	1.14, 7.08; 6.43□¤	none
174	Mixer bin	FEP 140	7.08; 6.43 §9	BV19
175	Elevator	- - - - - -	7.08; 6.43 §9	BV19
176	Sizing screen	- - - - - -	1.14, 7.08; 6.43 §9	none
177	Loading screw	FEP 141	7.08; 6.43 §9	BV20
178	Shipping vessel loading (1)	FEP 143	1.14, 7.08; 6.43□¤	none
179	Oversize return bin	FEP 142	1.14, 7.08; 6.43 §9	none
180	First loading screw	- - - - - -	1.14, 7.08; 6.43 §9	none
181	Holding bin	- - - - - -	1.14, 7.08; 6.43 §9	none
182	Shipping vessel loading (2)	FEP 145	1.14, 7.08; 6.43 §9	none
183	Second loading screw	FEP 146	7.08; 6.43 §9	BV21

Emission Point	Description	Previous Designation	Applicable Regulations	Control ID
184	Shipping vessel loading (3)	FEP 147	1.14, 7.08; 6.43 §9	none
185	Transporter fill station	FEP148	1.14, 7.08; 6.43 §9	none
186	E Stand	FEP 144	1.14, 7.08; 6.43 §9	none
187	#7 bin	FEP 149	7.08; 6.43 §9	BV22
188	Screw conveyor from bin #7	- - - - - -	1.14, 7.08; 6.43 §9	none
191	Container loading station	FEP 152	1.14, 7.08; 6.43 §9	none

Control Devices:

Device ID	Description	Performance Indicator	Range	Stack ID
BV 19	Bin vent (Mixer bin/elevator)	VE Survey	< 20% Opacity	BV19
BV 20	Bin vent (Loading screw)	VE Survey	< 20% Opacity	BV20
BV 21	Bin vent (Second loading screw)	VE Survey	< 20% Opacity	BV21
BV 22	Bin vent (Bin #7)	VE Survey	< 20% Opacity	BV22

Additional Conditions

S1. Standards

[Regulation 2.16, section 4.1]

a. Particulate Matter (PM)

i. The owner or operator must take reasonable precautions to prevent fugitive emissions from becoming airborne beyond the boundaries of the building in which the equipment of this emission unit is contained. [Regulation 1.14, section 2]

ii. The owner or operator shall not allow the emission of particulate matter from this emission unit to exceed the following limits: [Regulation 7.08, section 3.1]

1. 2.34 lb/hr if the process weight rate is less than or equal to 0.50 tons per hour;
2. $3.59 \times P^{0.62}$ lb/hr (where P is the process weight rate), if the process weight rate is greater than 0.50 tons per hour and less than or equal to 30.0 tons per hour;
3. $17.31 \times P^{0.16}$ lb/hr (where P is the process weight rate), if the process weight rate is greater than 30.0 tons per hour.

b. Opacity

The owner or operator shall not cause or allow any discharge from any opening in the building housing the named process equipment, or any control device associated with this equipment to equal or exceed 20% opacity.
[Regulation 6.09, section 3.1]

c. Volatile Organic Compounds (VOC)

VOC emissions resulting from the handling of the calcium carbide processed by this equipment shall be included as part of the plant-wide VOC emission limit of 6400 pounds per day, as specified in the Plantwide Limits section of this permit.

S2. Monitoring and Recordkeeping

[Regulation 2.16, Section 4.1.9]

Records of all required monitoring data and support information shall be retained for a period of five years from the date of the monitoring sample, measurement, report, or application. Support information includes all calibration and maintenance records and all original strip chart recordings or computer data and log files for continuous monitoring instrumentation, and copies of all other records required by the permit.

a. Particulate Matter

i. The owner or operator shall maintain records of the monthly throughput of calcium carbide at each emission point.

ii. If there are any periods during which the PM emission at any emission point exceeds the rate specified in S1.a.ii, the owner or operator shall:

1. Calculate the rate of PM emission from the affected emission point(s)using an emission factor of 0.11 $lb_{PM}/ton_{carbide}$[33] for controlled sources and 2.2 $lb_{PM}/ton_{carbide}$ for uncontrolled sources[34] unless a different emission factor has been approved by APCD.
2. Record the following information:
   (a) The date of the excess throughput;
   (b) The start and stop time of the excess throughput;
   (c) The affected process equipment;
   (d) PM emissions during the excess throughput event, in pounds per hour;
   (e) The cause of the excess emissions.

iii. The owner or operator shall keep records of any periods of time when a process was operating and an associated control device was not operating, or a declaration that the control device operated at all times that day when the process was operating.

[33] See AP42 table 11.4-2, SCC 3-05-004-05.
[34] This value is based on the controlled emission factor and a control efficiency of 95%.

iv. The owner or operator shall maintain records of any periods when a process was operating and an associated control device was not operating, or a declaration that the control device operated at all times that day when the process was operating. For each period which the control was not operating or was bypassed the record must include:
1. Date;
2. Start time and stop time;
3. Identification of the control device and process equipment;
4. PM emissions during the bypass, in lb/hr;
5. Summary of the cause or reason for each bypass event;
6. Corrective action taken to minimize the extent or duration of the bypass event; and
7. Measures implemented to prevent reoccurrence of the situation that resulted in the bypass event.

v. The owner or operator shall perform the following inspections to assure ongoing compliance with the established PM emission limit:
1. Daily:
Verify that the fans associated with the equipment are operating;
2. Monthly:
(a) Verify that dampers are working properly;
(b) Verify the bag cleaning mechanisms are working properly;
(c) Verify baghouse bags are clean and not filled with dust;
(d) Inspect the bags for excessive wear or damage, and replace if necessary;
(e) Inspect exhaust stacks for signs of dust accumulation; and
(f) Inspect the mechanical integrity of the baghouses for excessive wear or damage.

b. Opacity

i. The owner or operator shall conduct a weekly one-minute visible emissions survey of all emission points during normal operation and daylight hours. The opacity surveys can be performed on the building exhaust points if the process is inside an enclosure.

ii. For emission points without observed visible emissions during twelve consecutive operating weeks, the owner or operator may elect to reduce the visible emission frequency to monthly.

iii. At emission points where visible emissions are observed, the owner or operator shall initiate corrective action within eight hours of the initial observation. If the visible emissions persist, the owner or operator shall perform or cause to be performed a Method 9 or Method 22, as appropriate, in accordance with 40 CFR Part 60, Appendix A, within 24 hours of the initial observation. In addition, if the visible emission survey frequency had been reduced to monthly, weekly survey frequency must be resumed until the 12-week criterion is again met.

iv. The owner or operator shall keep records of the results of all visible emissions surveys and tests. Records of the results of any visible emissions survey shall include:

1. The date of the survey,
2. The name of the person conducting the survey,
3. Whether or not visible emissions were observed, and
4. What, if any, corrective action was performed.

If an emission point is not being operated during a given survey period, then no visible emission survey needs to be performed and a negative declaration shall be entered in the record.

c. Volatile Organic Compounds

The owner or operator shall record daily:

i. The weight of calcium carbide processed through the Desulphurization System;

ii. The time, date, and weight of calcium carbide captured by and emptied from each air pollution control device;

iii. The VOC emissions from this emission unit. For the purposes of this calculation, emissions from material collected from control devices shall be assigned to the day that the material is collected, if collection occurs less frequently than daily. VOC emissions shall be calculated using an emission factor of 4.63 $lb_{VOC}/ton_{carbide}$ [35] unless a different emission factor has been approved by APCD.

S3. Reporting

[Regulation 2.16, section 4.1.9.3]

The owner or operator shall submit semi-annual compliance reports that meet the requirements of General Condition 14 and include the following pollution-specific information.
[Regulation 2.16, section 3.5.11]

a. Particulate Matter

The owner or operator shall provide the following information in a semi-annual compliance monitoring report for PM:

i. Emission Unit and Emission Point Identification;

ii. The beginning and ending dates of the reporting period;

iii. Monthly total throughput of calcium carbide, in tons;

iv. Monthly total hours of operation;

v. Identification of all periods of exceedance of the hourly PM emissions rate standards established in S1.a.ii., including calculation of the emission rate and the quantity of excess emissions during such periods, or a negative declaration if there were no such periods;

vi. Identification of all periods during which a PM control device was bypassed during operation of the associated process equipment, including the date, time, and duration of each such bypass event and the calculated

[35] The emission factor of 4.62 lb_{VOC}/is the value used in the permittee's PTE calculations submitted as part of the March 2013 permit renewal application..

emission rate and quantity of emissions during such periods, or a negative declaration if there were no such periods;

vii. A calculation of monthly PM, PM_{10}, and $PM_{2.5}$ emissions, based on accepted emission factors, control factors (which must be stated in the report), calcium carbide production, and any control device bypass periods.

b. Opacity

The owner or operator shall provide the following information in a semi-annual compliance monitoring report for opacity:

i. Emission Unit and Emission Point Identification;
ii. The beginning and ending dates of the reporting period;
iii. The date, time, and results for each visible emission survey during which visible emissions were detected, or a negative declaration if no visible emission were observed
iv. The date, time, and results of each Method 9 or Method 22 observation required to be conducted as a result of visual emission monitoring required by S2.b.iii., or a negative declaration if no observations were required.

c. Volatile Organic Compounds

The owner or operator shall report VOC emissions as specified in the section of this permit related to plant-wide emission limits.

U8 – Wet Generator

Applicable Regulations:

FEDERALLY ENFORCABLE REGULATIONS		
Regulation	**Title**	**Applicable Sections**
1.14	Control of Fugitive Particulate Emission	1, 2, 8
6.09	Standards of Performance for Existing Process Operations	1, 2, 3
6.43	Volatile Organic Compound Emission Reduction Requirements	9

DISTRICT-ONLY ENFORCABLE REGULATIONS		
Regulation	**Title**	**Applicable Sections**
5.02	General Provisions (STAR)	all
5.21	Environmental Acceptability for Toxic Air Contaminants	1, 2
5.23	Categories of Toxic Air Contaminants	1, 2
6.39	Standard of Performance for Equipment Leaks of Volatile Organic Compounds in Existing Synthetic Organic and Polymer Manufacturing Plants	1, 2, 3, 5

FEDERAL REGULATIONS	
Regulation	**Title**
40 CFR 60, subpart VV	Standards of Performance for Equipment Leaks of VOC in Synthetic Organic Chemical Manufacturing …

Emission Points:

Emission Point	Description	Previous Designation	Applicable Regulations	Control ID
192	Dense phase pneumatic conveyor	FEP 155	1.14, 6.09, 6.43 §9	none
193	Elevator	FEP 164	6.09, 6.43 §9	BV 23
194	Batch hopper	- - - - - -	1.14, 6.09, 6.43 §9	none
195	Purge hopper	- - - - - -	1.14, 6.09, 6.43 §9	none
196	Feed hopper	- - - - - -	1.14, 6.09, 6.43 §9	none
197	Wet generator feed screw	- - - - - -	1.14, 6.09, 6.43 §9	none

Emission Point	Description	Previous Designation	Applicable Regulations	Control ID
198	Wet generator	- - - - - -	6.09, 6.43 §9	none
199	Cooling tower	- - - - - -	6.09, 6.43 §9	none
200	Acetylene holding tank	FEP 156	6.09, 6.43 §9	C10
201	Recuperator	- - - - - -	6.09, 6.43 §9	none
202	Hydrate slurry pit	FEP 165	6.09, 6.43 §9	F
203	160 foot Thickener tank	- - - - - -	6.09, 6.43 §9	none
204	North 90 Thickener tank	- - - - - -	6.09, 6.43 §9	none

Control Devices:

Device ID	Description	Performance Indicator	Range	Stack ID
C10	Acetylene flare – NAO, Inc., model#3 NMJM-AA 4200 ft^3/min acetylene, with 48,000 ft^3/min air, ϵ=0.985 (installed 2007)	Flame presence	Flame present	S10
BV 23	Bin vent (Elevator)	VE Survey	< 20% Opacity	BV23

Additional Conditions

S1. Standards

[Regulation 2.16, section 4.1]

a. Particulate Matter (PM)

i. The owner or operator must take reasonable precautions to prevent fugitive emissions from becoming airborne beyond the boundaries of the building in which this emission unit is contained or the facility boundaries. [Regulation 1.14, section 2]

ii. The owner or operator shall not allow the emission of particulate matter from emission points E192-E197 to exceed 13.0 lb/hr.[36] [Regulation 6.09, section 3.2]

b. Opacity

The owner or operator shall not cause or allow any gases that contain PM equal to or greater than 20% opacity to be discharged into the atmosphere. [Regulation 6.09, section 3.3.1]

[36] This limit is based on the maximum throughput specified in the revised permit renewal application received 22 March 2013 after accounting for alternative flow paths for processing and the calculation of emission rate specified in Table 1 of Regulation 6.09

c. Volatile Organic Compounds (VOC)

i. VOC emissions resulting from the reaction of the calcium carbide processed by this equipment and transportation and processing of the resulting acetylene shall be included as part of the plant-wide VOC emission limit of 6400 pounds per day, as specified in the Plantwide Limits section of this permit.
[Regulation 6.43 section 9]

ii. Any valve used for the control of the flow of acetylene gas that is tested as specified in 40 CFR 60.485(b) shall be considered to be leaking if the leak-check instrument reading is 10,000 ppm or greater.
[Regulation 6.39, section 1, referencing 40 CFR 60.482-3]

1. When a leak is detected it shall be repaired as soon as practicable, but not more than 15 calendar days after it is detected, except as provided in 40 CFR 60.482-9. A first attempt at repair shall be made no later than 5 days after the leak is detected.
2. Certain valves may be designated as "unsafe-to-monitor" as described in 40 CFR 60.486(f)(1).
3. Certain valves may be designated as "difficult-to-monitor" if the valve cannot be monitored without elevating the monitoring personnel more than 2 meters above a support surface.

iii. Except for emissions due to purging with fresh air prior to maintenance operations, venting of VOC from acetylene holding tank, E200, shall occur only through the acetylene flare, C10. This flare must comply with the requirements of 40 CFR 60.18.
[Regulation 6.39, section 1, referencing 40 CFR 60.482-10(d)]

1. The flare shall be designed and operated with no visible emissions, except for periods not to exceed a total of 5 minutes during any 2 consecutive hours.
2. The flare shall be operated with a flame present at all times. The presence of a flare pilot flame shall be monitored using a thermocouple or any other equivalent device.
3. The exit velocity of the flare shall not exceed 400 ft/sec.
4. Emissions from maintenance purging shall be estimated and these emissions shall be included in the daily plantwide VOC emission calculations.

iv. Any closed vent system that is tested as provided in 40 CFR 60.485(b) shall be considered to be leaking if the leak-check instrument reading is greater than 500 ppm by volume above background.
[Regulation 6.39, section 1, referencing 40 CFR 60.482-10(f)]

1. When a leak is detected it shall be repaired as soon as practicable, but not more than 15 calendar days after it is detected, except as provided in 40 CFR 60.482-10(h). A first attempt at repair shall be made no later than 5 days after the leak is detected.
2. Certain parts of a closed vent system may be designated as "unsafe-to-monitor" as described in 40 CFR 60.482-10(j).

3. Certain parts of a closed vent system may be designated as "difficult-to-monitor" if the equipment cannot be monitored without elevating the monitoring personnel more than 2 meters above a support surface.

vi. Any other components specified in 40 CFR 60, subpart VV but not explicitly included in this section that are part of this emission unit shall be governed by the standards set forth in the version of that regulation in force on the date of this permit issuance.

d. Toxic Air Contaminants

The owner or operator shall not allow emissions of any TAC to exceed environmentally acceptable (EA) levels, whether specifically established by modeling or determined by the District to be *de minimis*.
[Regulations 5.00 and 5.21]

S2. Monitoring and Recordkeeping

[Regulation 2.16, Section 4.1.9]

Records of all required monitoring data and support information shall be retained for a period of five years from the date of the monitoring sample, measurement, report, or application. Support information includes all calibration and maintenance records and all original strip chart recordings or computer data and log files for continuous monitoring instrumentation, and copies of all other records required by the permit.

a. Particulate Matter

i. The owner or operator shall keep records of the monthly throughput of calcium carbide at each emission point subject to PM emission standards.

ii. If there are any periods during which the PM emission at any emission point subject to PM emission standards exceeds the rate specified in S1.a.ii, the owner or operator shall:

1. Calculate the rate of PM emission from the affected emission point(s)using an emission factor of 0.11 $lb_{PM}/ton_{carbide}$[37] for controlled sources and 2.2 $lb_{PM}/ton_{carbide}$ for uncontrolled sources[38] unless a different emission factor has been approved by APCD.
2. Record the following information:
   (a) The date of the excess throughput;
   (b) The start and stop time of the excess throughput;
   (c) The affected process equipment;
   (d) PM emissions during the excess throughput event, in pounds per hour;
   (e) The cause of the excess emissions.

iii. The owner or operator shall maintain records of any periods when a process was operating and an associated control device was not operating, or a declaration that the control device operated at all times that day when

[37] See AP42 table 11.4-2, SCC 3-05-004-05.
[38] This value is based on the controlled emission factor and a control efficiency of 95%.

the process was operating. For each period which the control was not operating or was bypassed the record must include:

1. Date;
2. Start time and stop time;
3. Identification of the control device and process equipment;
4. PM emissions during the bypass, in lb/hr;
5. Summary of the cause or reason for each bypass event;
6. Corrective action taken to minimize the extent or duration of the bypass event; and
7. Measures implemented to prevent reoccurrence of the situation that resulted in the bypass event.

b. Opacity

i. The owner or operator shall conduct a weekly one-minute visible emissions survey of all emission points during normal operation and daylight hours. The opacity surveys can be performed on the building exhaust points if the process is inside an enclosure.

ii. For emission points without observed visible emissions during twelve consecutive operating weeks, the owner or operator may elect to reduce the visible emission frequency to monthly.

iii. At emission points where visible emissions are observed, the owner or operator shall initiate corrective action within eight hours of the initial observation. If the visible emissions persist, the owner or operator shall perform or cause to be performed a Method 9, in accordance with 40 CFR Part 60, Appendix A, within 24 hours of the initial observation. In addition, if the visible emission survey frequency had been reduced to monthly, weekly survey frequency must be resumed until the 12-week criterion is again met.

iv. The owner or operator shall keep records of the results of all visible emissions surveys and tests. Records of the results of any visible emissions survey shall include:

1. The date of the survey,
2. The name of the person conducting the survey,
3. Whether or not visible emissions were observed, and
4. What, if any, corrective action was performed.

If an emission point is not being operated during a given survey period, then no visible emission survey needs to be performed and a negative declaration shall be entered in the record.

c. Volatile Organic Compounds

i. To meet the requirements of Regulation 6.43 section 9, these records shall be kept for each day of operation of any component of this emission unit:

1. The weight of calcium carbide processed through the wet generator;
2. The volume of acetylene (in pounds or standard cubic feet) burned at the flare, C10;

3. The total VOC emissions from this emission unit.[39]
   (a) For emission points E192-E197, emissions shall be calculated using an emission factor of 0.54 $lb_{VOC}/ton_{carbide}$;
   (b) For emission points E202, emissions shall be calculated using an emission factor of 0.60 $lb_{VOC}/ton_{carbide}$;
   (c) For The acetylene flare, C10, emissions shall be calculated based on an acetylene destruction efficiency of 98.5%;
   (d) These emission factors may be modified if a different value is approved by APCD.

ii. For batch-process equipment that operates less than 365 days per year, the owner or operator may perform monitoring to detect leaks from pumps and valves at a reduced frequency as specified in this table:

Operating time (percent of hours during the year)	Specified Monitoring Frequency		
	Monthly	**Quarterly**	**Semiannually**
0 to <25%	Quarterly	Annually	Annually
25% to <50%	Quarterly	Semiannually	Annually
50% to <75%	Bimonthly	Three quarters	Semiannually
75% to 100%	Monthly	Quarterly	Semiannually

The monitoring frequencies specified are not requirements for monitoring at specific intervals, and can be adjusted to accommodate process operations. The owner or operator may monitor at any time during the specified monitoring period, provided:

- For quarterly monitoring, monitoring events must be separated by at least 30 calendar days;
- For semiannual monitoring, monitoring events must be separated by at least 60 calendar days;
- For monitoring 3 quarters per year, monitoring events must be separated by at least 90 calendar days;
- For annual monitoring, monitoring events must be separated by at least 120 calendar days.

iii. Each valve used for the control of the flow of acetylene gas shall be monitored monthly to detect leaks, as specified in 40 CFR 60.485(b).
   1. A valve will be considered to be leaking if an instrument reading of 10,000 ppm or greater is obtained during leak testing.
   2. Any valve for which a leak has not been detected for 2 successive months may be monitored during the first month of every quarter, beginning with the next quarter. If a valve is being monitored quarterly and a leak is detected, monthly checking shall resume until 2 successive leak-free months has occurred.
   3. When a leak is detected, the owner or operator shall attach to the leaking equipment a weatherproof and readily visible identification, marked with the equipment identification number.

[39] These emission factors are those used in the permittee's PTE calculations submitted as part of the March 2013 permit renewal application.

This identification may be removed after the leak has been repaired.

4. A log specifying the steps taken to repair any leak, as required in S1.c.iii.1. shall be kept, and maintained for 2 years from the date of creation. This log shall contain the following information:
   (a) The leak-detection instrument, operator, and equipment identification numbers,
   (b) The date the leak was detected and the dates of each attempt to repair the leak;
   (c) Repair methods applied in each attempt to repair the leak;
   (d) "Above 10,000" if the maximum instrument reading measured after each repair attempt is equal to or greater than 10,000 ppm;
   (e) "Repair delayed" and the reason for the delay if a leak is not repaired within 15 calendar days after discovery of the leak;
   (f) If a determination that a repair cannot be effected without a process shutdown, the signature of the owner or operator who made such determination;
   (g) The expected date of successful repair if the leak cannot be repaired within 15 days;
   (h) Dates of process unit shutdowns that occur while the equipment is unrepaired;
   (i) The date of successful repair of the leak.
4. The owner or operator shall maintain written documentation for any valves deems "unsafe to monitor," demonstrating that regular monitoring would expose personnel to immediate danger and provide a written plan that requires monitoring of the valves as frequently as practicable during "safe-to-monitor" periods.
5. The owner or operator shall maintain and follow a written plan that requires monitoring of valves declared "difficult to monitor" at least once per calendar year.

iv. For the acetylene flare, the owner or operator shall record and keep the following information in a readily accessible location:
1. Detailed schematics, design specifications, and piping and instrumentation diagrams;
2. The dates and descriptions of any changes in the design specifications;
3. A description of the parameter(s) monitored to ensure that the flare is operated and maintained in accordance with its design, and an explanation of why that parameter (or parameters) was selected for monitoring;
4. Periods when the flare is not operated as designed, including periods when the flare pilot light does not have a flame;
5. Dates of startups and shutdowns of the flare.

v. Each vapor-collection or closed-vent system shall be monitored annually to detect leaks, as specified in 40 CFR 60.485(b) if the system consists of

ductwork, or a visual inspection for visible, audible, or olfactory indications of leaks if constructed of hard piping.

1. The system will be considered to be leaking if an instrument reading of 500 ppm or greater is obtained during leak testing.
2. When a leak is detected, the owner or operator shall attach to the leaking equipment a weatherproof and readily visible identification, marked with the equipment identification number. This identification may be removed after the leak has been repaired.
3. A log specifying the steps taken to repair any leak, as required in S1.c.v.1) shall be kept, and maintained for 2 years from the date of creation. This log shall contain the following information:
   (a) The leak-detection instrument, operator, and equipment identification numbers,
   (b) The date the leak was detected and the dates of each attempt to repair the leak;
   (c) Repair methods applied in each attempt to repair the leak;
   (d) "Above 10,000" if the maximum instrument reading measured after each repair attempt is equal to or greater than 10,000 ppm;
   (e) "Repair delayed" and the reason for the delay if a leak is not repaired within 15 calendar days after discovery of the leak;
   (f) If a determination that a repair cannot be effected without a process shutdown, the signature of the owner or operator who made such determination;
   (g) The expected date of successful repair if the leak cannot be repaired within 15 days;
   (h) Dates of process unit shutdowns that occur while the equipment is unrepaired;
   (i) The date of successful repair of the leak.
4. The owner or operator shall maintain written documentation for any valves deems "unsafe to monitor," demonstrating that regular monitoring would expose personnel to immediate danger and provide a written plan that requires monitoring of the valves as frequently as practicable during "safe-to-monitor" periods.
5. The owner or operator shall maintain and follow a written plan that requires monitoring of valves declared "difficult to monitor" at least once per calendar year.

d. Toxic Air Contaminants

i. The owner or operator shall maintain records sufficient to demonstrate environmental acceptability, including, but not limited to MSDS, analysis of emissions, and/or modeling results.

ii. The owner or operator shall re-evaluate the environmental acceptability and document the environmentally acceptable emissions if a new TAC is introduced or the content of a TAC in a raw material increases.

S3. Reporting

[Regulation 2.16, section 4.1.9.3]

The owner or operator shall submit semi-annual compliance reports that meet the requirements of General Condition 14 and include the following pollution-specific information.
[Regulation 2.16, section 3.5.11]

a. Particulate Matter

The owner or operator shall provide the following information in a semi-annual compliance monitoring report for PM:

i. Emission Unit and Emission Point Identification;
ii. The beginning and ending dates of the reporting period;
iii. Monthly total throughput of calcium carbide, in tons;
iv. Monthly total hours of operation;
v. Identification of all periods of exceedance of the hourly PM emissions rate standards established in S1.a.ii., including calculation of the emission rate and the quantity of excess emissions during such periods, or a negative declaration if there were no such periods;
vi. Identification of all periods during which a PM control device was bypassed during operation of the associated process equipment, including the date, time, and duration of each such bypass event and the calculated emission rate and quantity of emissions during such periods, or a negative declaration if there were no such periods;
vii. A calculation of monthly PM, PM_{10}, and $PM_{2.5}$ emissions, based on accepted emission factors, control factors (which must be stated in the report), calcium carbide production, and any control device bypass periods.

b. Opacity

The owner or operator shall provide the following information in a semi-annual compliance monitoring report for opacity:

i. Emission Unit and Emission Point Identification;
ii. The beginning and ending dates of the reporting period;
iii. The date, time, and results for each visible emission survey during which visible emissions were detected, or a negative declaration if no visible emission were observed;
iv. The date, time, and results of each Method 22 or Method 9 observation required to be conducted as a result of visual emission monitoring required by S2.b.iii., or a negative declaration if no Method 22 or Method 9 observations were required.

c. Volatile Organic Compounds

i. The owner or operator shall report VOC emissions as specified in the section of this permit related to plant-wide emission limits;

ii. The number of pumps and compressors subject to monitoring requirements;

1. The number of pumps and compressors for which leaks were detected during each month of the reporting period;
2. The number of pumps and compressors that were not repaired as required;
3. The facts that explain each delay of repair and, where appropriate, why a process unit shutdown was technically infeasible.

iii. The number of valves subject to monitoring requirements;

1. The number of valves for which leaks were detected during each month of the reporting period;
2. The number of valves that were not repaired as required;

iv. Dates of process unit shutdowns which occurred during the reporting period.

d. Toxic Air Contaminants

i. The owner or operator shall report any conditions that were inconsistent with those conditions analyzed in the most recent Environmental Acceptability Demonstration or a negative declaration stating that operations were within the conditions analyzed. This includes, but is not limited to, control device upset conditions.

ii. For any conditions outside the analysis, the owner or operator shall re-analyze to determine whether these conditions comply with the STAR program. Changes to the air dispersion modeling program or meteorological data used in the most recent Environmental Acceptability Demonstration do not trigger the requirement to re-analyze. (Regulation 5.21 sections 4.22 – 4.24)

iii. The owner or operator shall submit the re-evaluated EA demonstration to the District within 6 months of a change of a raw material as described in S2.d.ii.

U9 – Dry Generator

This equipment was a component of Emission unit U8 in the original Title V permit issued in 2001. This equipment is no longer in service.

U10 – Acetylene Compression and Purification

This equipment was a component of Emission unit U8 in the original Title V permit issued in 2001. This equipment is no longer in service.

U11 – Fuel Storage

Applicable Regulations:

FEDERALLY ENFORCABLE REGULATIONS		
Regulation	**Title**	**Applicable Sections**
6.13	Standards of Performance for Existing Storage Vessels for Volatile Organic Compounds	1, 2, 4
6.15	Standards of Performance for Gasoline Transfer to Existing Service Station Storage Tanks (Stage 1 Vapor Recovery)	1, 2, 3, 4, 5
6.40	Standards of Performance for Gasoline Transfer to Motor Vehicles (Stage II Vapor Recovery and Control Systems)	1, 2
6.43	Volatile Organic Compound Emission Reduction Requirements	9

DISTRICT-ONLY ENFORCABLE REGULATIONS		
Regulation	**Title**	**Applicable Sections**
5.02	General Provisions (STAR)	all
5.21	Environmental Acceptability for Toxic Air Contaminants	1, 2
5.23	Categories of Toxic Air Contaminants	1, 2

Emission Points:

Emission Point	Description	Previous Designation	Applicable Regulations	Control ID
205	Gasoline Storage Tank (550 gal) [40]	FEP 178	6.13, 6.15, 6.43 §9, 5.02, 5.21, 5.23	none

[40] In the original issue of this Title V permit, this tank was listed as being subject to Regulation 7.15, which applies to storage tanks constructed after 13 June 1979. In the application for permit renewal, the permittee has indicated that this tank was installed "prior to 1978." Consequently, the proper governing regulation is 6.15.

Additional Conditions

S1. Standards

[Regulation 2.16, section 4.1]

Volatile Organic Compounds

i. VOC emissions from this equipment shall be included as part of the plant-wide VOC emission limit of 6400 pounds per day as specified in the Plantwide Limits section of this permit.
[Regulation 6.43 section 9]

ii. The owner or operator shall install, maintain, and operate the following devices on the storage tank:
   1. A submerged fill pipe;
   2. If the tank is equipped with a separate gauge well, a gauge-well drop tube which extends to within 6 inches of the bottom of the tank shall be installed;
   3. Vent line restrictions;
   4. A vapor balance system and vapor-tight connections on the liquid-fill and vapor-return hoses.

S2. Monitoring and Recordkeeping

[Regulation 2.16, Section 4.1.9]

Records of all required monitoring data and support information shall be retained for a period of five years from the date of the monitoring sample, measurement, report, or application. Support information includes all calibration and maintenance records and all original strip chart recordings or computer data and log files for continuous monitoring instrumentation, and copies of all other records required by the permit.

Volatile Organic Compounds

i. Based on the monthly gasoline throughput, the owner or operator shall calculate the average daily VOC emissions, to meet the requirements of Regulation 6.43 section 9.

ii. The owner or operator shall keep records of the gasoline throughput each calendar month. Throughput may be represented by the volume of gasoline received.

S3. Reporting

[Regulation 2.16, section 4.1.9.3]

The owner or operator shall submit semi-annual compliance reports that meet the requirements of General Condition 14 and include the following pollution-specific information.
[Regulation 2.16, section 3.5.11]

Volatile Organic Compounds

i. The owner or operator shall report VOC emissions as specified in the section of this permit related to plant-wide emission limits;

ii. Reporting of gasoline throughput must be reported annually on the form provided for that purpose.
[Regulation 6.40, section 2.2.1]

U12 – Gas-Fired Boiler

Applicable Regulations:

FEDERALLY ENFORCABLE REGULATIONS		
Regulation	**Title**	**Applicable Sections**
7.06	Standards of Performance for New Indirect Heat Exchangers	1, 2, 3, 4, 5

Emission Points:

Emission Point	Description	Previous Designation	Applicable Regulations	Control ID
208	Gas-Fired Boiler, rated at 3.3 MMBtu/hr maximum heat input. Fueled by either natural gas or carbon monoxide.	EP 021	7.06	none

Additional Conditions

S1. Standards
[Regulation 2.16, section 4.1]

a. Particulate Matter
The owner or operator shall not allow the emission of PM to exceed 0.56 pounds per million Btu actual heat input.
[Regulation 7.06, section 4.1.1]

b. Opacity
The owner or operator shall not allow emissions which exhibit opacity greater than 20% except:
[Regulation 7.06, section 4.2]

i. A maximum of 40% opacity is permissible for not more than 2 consecutive minutes in any 60 consecutive minutes;
ii. While bringing the boiler to normal operating conditions, provided the method used is that recommended by the boiler manufacturer.

c. Sulfur Dioxide
The owner or operator shall not allow the emission of SO_2 to exceed 1.0 pounds per million Btu of actual heat input.
[Regulation 7.06, section 5.1.1]

d. Greenhouse Gasses

No standards exist for this pollutant.

S2. Monitoring and Recordkeeping

[Regulation 2.16, Section 4.1.9]

Records of all required monitoring data and support information shall be retained for a period of five years from the date of the monitoring sample, measurement, report, or application. Support information includes all calibration and maintenance records and all original strip chart recordings or computer data and log files for continuous monitoring instrumentation, and copies of all other records required by the permit.

a. Particulate Matter

There are no regular monitoring or recordkeeping requirements for this pollutant.

b. Opacity

There are no regular monitoring or recordkeeping requirements for this pollutant.

c. Sulfur Dioxide

There are no regular monitoring or recordkeeping requirements for this pollutant.

d. Greenhouse Gasses

The owner or operator shall keep records of the total amount of natural gas and the total amount of carbon monoxide combusted in the boiler each month.

S3. Reporting

[Regulation 2.16, section 4.1.9.3]

The owner or operator shall submit semi-annual compliance reports that meet the requirements of General Condition 14 and include the following pollution-specific information.
[Regulation 2.16, section 3.5.11]

a. Particulate Matter

There are no regular reporting requirements for this pollutant.

b. Opacity

There are no regular reporting requirements for this pollutant.

c. Sulfur Dioxide

There are no regular reporting requirements for this pollutant.

d. Greenhouse Gasses

The owner or operator shall report the total amount of natural gas and the total amount of carbon monoxide combusted in the boiler each month.

U13 – Storm Water Neutralization

Applicable Regulations:

FEDERALLY ENFORCABLE REGULATIONS		
Regulation	**Title**	**Applicable Sections**
5.21	Environmental Acceptability for Toxic Air Contaminants	1, 2

Emission Points:

Emission Point	Description	Previous Designation	Applicable Regulations	Control ID
209	Storm water treatment plant	FEP 173	5.12	fugitive

Additional Conditions

S1. Standards
[Regulation 2.16, section 4.1]

Toxic Air Contaminants

The owner or operator shall not allow emissions of any TAC to exceed environmentally acceptable (EA) levels, whether specifically established by modeling or determined by the District to be *de minimis*.
[Regulations 5.00 and 5.21]

S2. Monitoring and Recordkeeping
[Regulation 2.16, Section 4.1.9]

Records of all required monitoring data and support information shall be retained for a period of five years from the date of the monitoring sample, measurement, report, or application. Support information includes all calibration and maintenance records and all original strip chart recordings or computer data and log files for continuous monitoring instrumentation, and copies of all other records required by the permit.

Toxic Air Contaminants

i. The owner or operator shall maintain records sufficient to demonstrate environmental acceptability, including, but not limited to MSDS, analysis of emissions, and/or modeling results.

ii. The owner or operator shall re-evaluate the environmental acceptability and document the environmentally acceptable emissions if a new TAC is introduced or the content of a TAC in a raw material increases.

S3. Reporting

The owner or operator shall submit semi-annual compliance reports that meet the requirements of General Condition 14 and include the following pollution-specific information.

Toxic Air Contaminants

i. The owner or operator shall report any conditions that were inconsistent with those conditions analyzed in the most recent Environmental Acceptability Demonstration or a negative declaration stating that operations were within the conditions analyzed. This includes, but is not limited to, control device upset conditions.

ii. For any conditions outside the analysis, the owner or operator shall re-analyze to determine whether these conditions comply with the STAR program. Changes to the air dispersion modeling program or meteorological data used in the most recent Environmental Acceptability Demonstration do not trigger the requirement to re-analyze.
(Regulation 5.21 sections 4.22 – 4.24)

iii. The owner or operator shall submit the re-evaluated EA demonstration to the District within 6 months of a change of a raw material as described in S2.ii.

U14 – Tote Reconditioning

Applicable Regulations:

FEDERALLY ENFORCABLE REGULATIONS		
Regulation	**Title**	**Applicable Sections**
7.08	Standards of Performance for New Process Operations	1, 2, 3
7.59	Standards of Performance for New Miscellaneous Metal Parts and Products Surface Coating Operations	1, 2, 5, 6, 7
6.43	Volatile Organic Compound Emission Reduction Requirements	9

DISTRICT-ONLY ENFORCABLE REGULATIONS		
Regulation	**Title**	**Applicable Sections**
5.02	General Provisions (STAR)	all
5.21	Environmental Acceptability for Toxic Air Contaminants	1, 2
5.23	Categories of Toxic Air Contaminants	1, 2

Emission Points:

Emission Point	Description	Previous Designation	Applicable Regulations	Control ID
210	Shot blast equipment	FEP 182	7.08, 5.21	none
211	Spray paint booth	FEP 183	7.59, 5.21	none

Additional Conditions

S1. Standards
[Regulation 2.16, section 4.1]

a. Particulate Matter

i. The owner or operator must take reasonable precautions to prevent fugitive emissions from becoming airborne beyond the boundaries of the building in which this emission unit is contained or the facility boundaries. [Regulation 1.14, section 2]

ii. The owner or operator shall not allow the emission of particulate matter to exceed 2.34 lb/hr.
[Regulation 7.08, section 3.1.2]

b. Opacity

The owner or operator shall not cause or allow any gases that contain PM equal to or in excess of 20% opacity to be discharged into the atmosphere.
[Regulation 7.08, section 3.1.1]

c. Volatile Organic Compounds

i. VOC emissions from this equipment shall be included as part of the plant-wide VOC emission limit of 6400 pounds per day as specified in the Plantwide Limits section of this permit.
[Regulation 6.43, section 9]

ii. The VOC content of the paints applied shall not exceed:
[Regulation 7.59, section 3.1]
(a) 3.5 lb/gal for air-dry and extreme performance coatings;
(b) 3.0 lb/gal for all other base-coat material;
(c) 4.3 lb/gal for clearcoat materials.

d. Toxic Air Contaminants

The owner or operator shall not allow emissions of any TAC to exceed environmentally acceptable (EA) levels, whether specifically established by modeling or determined by the District to be *de minimis*.
[Regulations 5.00 and 5.21]

S2. Monitoring and Recordkeeping
[Regulation 2.16, Section 4.1.9]

Records of all required monitoring data and support information shall be retained for a period of five years from the date of the monitoring sample, measurement, report, or application. Support information includes all calibration and maintenance records and all original strip chart recordings or computer data and log files for continuous monitoring instrumentation, and copies of all other records required by the permit.

a. Particulate Matter

i. The owner or operator shall inspect the filters in the paint booth monthly to ensure that the filters are properly placed and that they allow free airflow. If there is a differential pressure gauge across the filter, filters must be replaced before the pressure difference exceeds the maximum differential recommended by the filter supplier.

ii. The owner or operator shall inspect the filters in the abrasive blast enclosure monthly to ensure that the filters are properly placed and that

they allow free airflow. If there is a differential pressure gauge across the filter, filters must be replaced before the pressure difference exceeds the maximum differential recommended by the filter supplier.

iii. A log of the monthly inspections of the paint booth and blast booth shall be kept. This log must show the date of inspection, the name or initials of the person making the inspection, the results of the inspection, and any actions taken as a result of the inspection or as part of regular maintenance operations.

b. Opacity

There are no additional monitoring or recordkeeping requirements for opacity.

c. Volatile Organic Compounds

The owner or operator shall keep daily records of the type of coating material used, volume of VOC-containing materials used, and the VOC content of each material. Material Safety Data Sheets for each material shall be kept on file during use and for five years from the date of last use.

d. Toxic Air Contaminants

i. The owner or operator shall maintain records sufficient to demonstrate environmental acceptability, including, but not limited to MSDS, analysis of emissions, and/or modeling results.

ii. The owner or operator shall re-evaluate the environmental acceptability and document the environmentally acceptable emissions if a new TAC is introduced or the content of a TAC in a raw material increases.

S3. Reporting

[Regulation 2.16, section 4.1.9.3]

The owner or operator shall submit semi-annual compliance reports that meet the requirements of General Condition 14 and include the following pollution-specific information.
[Regulation 2.16, section 3.5.11]

a. Particulate Matter

There are no regular reporting requirements for this pollutant.

b. Opacity

There are no regular reporting requirements for this pollutant.

c. Volatile Organic Compounds

The owner or operator shall include, at a minimum, the following information in the semi-annual compliance monitoring reports for PM:

i. Emission Unit and Emission Point Identification;
ii. The beginning and ending dates of the reporting period;
iii. Summary of the total usage of VOC-containing materials for each month of the reporting period;
iv. Total VOC emissions for each month of the reporting period.

d. Toxic Air Contaminants

i. The owner or operator shall report any conditions that were inconsistent with those conditions analyzed in the most recent Environmental Acceptability Demonstration or a negative declaration stating that operations were within the conditions analyzed. This includes, but is not limited to, control device upset conditions.
ii. For any conditions outside the analysis, the owner or operator shall re-analyze to determine whether these conditions comply with the STAR program. Changes to the air dispersion modeling program or meteorological data used in the most recent Environmental Acceptability Demonstration do not trigger the requirement to re-analyze. (Regulation 5.21 sections 4.22 – 4.24)
iii. The owner or operator shall submit the re-evaluated EA demonstration to the District within 6 months of a change of a raw material as described in S2.ii.

Permit Shield

The owner or operator is hereby granted a permit shield that shall apply as long as the owner or operator demonstrates ongoing compliance with all the conditions of this permit. Compliance with the conditions of this permit shall be deemed compliance with all applicable requirements of the regulations cited in this permit as of the date of issuance per District Regulation 2.16, section 4.6.1.

Off-Permit Documents

There are no off-permit documents associated with this Title V permit.

Alternative Operating Scenario

The company requested no alternative operating scenario in its Title V application.

Insignificant Activities

Insignificant activities identified in District Regulation 2.16, section 1.23 and Regulation 1.02, Appendix A, may be subject to size or production rate disclosure requirements pursuant to Regulation 2.16 section 3.5.4.1.4.

Insignificant activities approved as provided for in Regulation 2.16, Section 1.23.1.2 may be subject to size or production rate disclosure requirements pursuant to Regulation 2.16 section 3.5.4.1.4.

Insignificant activities identified by either regulation referenced in the foregoing paragraphs shall comply with generally applicable requirements as required by Regulation 2.16 section 4.1.9.4.

The District has determined, pursuant to Regulation 2.16 section 4.1.9.4, that no monitoring, record keeping, or reporting requirements apply to the insignificant activities listed.

The Insignificant Activities table shown on the next page is correct as of the date the permit was proposed for review by U.S. EPA, Region 4.

The company shall submit an updated list of insignificant activities annually with the Title V Compliance Certification, pursuant to Regulation 2.16 section 4.3.5.3.6.

Insignificant Activities		
Equipment	**Quan.**	**Regulation Basis**
Diesel fuel tanks (1@2000gallons, 1@100 gallons) 41	4	Regulation 2.16, section 1.23.1.1; Regulation 1.02, Appendix A, section 3.25
Heavy oil tank, 10,600 gallon capacity.42	1	Regulation 2.16, section 1.23.1.1; Regulation 1.02, Appendix A, section 3.9.2
Laboratory ventilation hood	1	Regulation 2.16, section 1.23.1.1; Regulation 1.02, Appendix A, section 3.11
Cold cleaner parts washer (water based) 43	2	Regulation 2.16, section 1.23.1.2

Trivial Activities	
Equipment	**Regulation Basis**
Vehicular internal combustion engines	Regulation 2.16, section 1.43; Regulation 1.02, section 1.80
Maintenance welding and brazing	Regulation 2.16, section 1.43; Regulation 1.02, section 1.80
Portable Diesel or gasoline storage cans	Regulation 2.16, section 1.43; Regulation 1.02, section 1.80

- end -

41 These tanks were designated FEP 174-FEP 177 in the original Title V permit issued September 2001.
42 This tank was designated FEP 195 in the original Title V permit issued September 2001.
43 These parts cleaners were solvent-based in the original Title V permit and listed as Emission Unit U12. They have been converted to a water-based detergent cleaner.